ORDER NO. AD9002031C8

Service Manual

Amplifier

Digital Integrated Amplifier

SU-X501

Color

(K) .... Black Type

Area

Country Code	Area	Color
(E)	Continental Europe	(K)
(EB)	Great Britain	(K)
(EG)	F.R. Germany & Italy	(K)
(GC)	Asia, Latin America, Middle Near East and Africa	(K)
(GN)	Oceania	(K)

SPECIFICATIONS

(DIN 45 500)

■ AMPLIFIER SECTION

DIN power output	
1 kHz THD: 1 %	2 × 60 W (8 Ω)
Total harmonic distortion	
rated power at 1 kHz	1 % (8 Ω)
Harmonic distortion	
half power at 1 kHz	0.009 % (8 Ω)
Residual hum and noise	0.2 mV
Damping factor	30 (8 Ω)
Input sensitivity and impedance	
PHONO	3 mV/47 kΩ
TUNER, AUX, TAPE 1, TAPE 2	150 mV/22 kΩ
CD	200 mV/22 kΩ
Maximum input voltage (1 kHz, RMS)	
PHONO	100 mV
S/N (rated power 8 Ω)	
PHONO	75 dB (IHF, A: 79 dB)
TUNER, CD, AUX, TAPE 1, TAPE 2	82 dB (IHF, A: 83 dB)
Frequency response	
PHONO	RIAA standard curve ±0.8 dB (30 Hz~15 kHz)
TUNER, CD, AUX, TAPE 1, TAPE 2	15 Hz~55 kHz (−3 dB)
CD, DAT, AUX (digital section)	15 Hz~20 kHz (−0.5 dB)
Tone controls	
BASS	50 Hz, +10 dB~−10 dB
TREBLE	20 kHz, +10 dB~−10 dB
Muting	−20 dB
Super bass	70 Hz, +10 dB
Output voltage	
TAPE 1, TAPE 2, REC OUT	150 mV
Channel balance, AUX 250 Hz~6,300 Hz	±1.0 dB
Channel separation, (TUNER, 1 kHz) (A SPEAKER)	60 dB
Headphones output level and impedance	520 mV/330 Ω
Load impedance	
A or B	8 Ω~16 Ω
SURROUND	8 Ω~16 Ω

■ GENERAL

Power consumption	300 W
Power supply	
For Great Britain and Oceania	AC 50 Hz/60 Hz, 240 V
For Continental Europe F.R. Germany and Italy	AC 50 Hz/60 Hz, 220 V
For others	AC 50 Hz/60 Hz, 110 V/127 V/220 V/240 V
Dimensions (W × H × D)	360 × 128 × 300 mm (14-3/16″ × 5-1/32″ × 11-13/16″)
Weight	6.6 kg (14.5 lb.)

Notes:

1. Specifications are subject to change without notice.
2. Weight and dimensions are approximate.
3. Total harmonic distortion is measured by the digital spectrum analyzer.

Technics

Matsushita Electric Industrial Co., Ltd.
Central P.O. Box 288, Osaka 530-91, Japan

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■ BEFORE REPAIR

(1) Turn off the power supply. Using a 10Ω, 5 W resistor connect both ends of power supply capacitors (C711, C712, 4700 μF) in order to discharge the voltage.

(2) Before turning the power supply on, after completion of repair, slowly apply the primary voltage by using a power supply voltage controller to make sure that the consumed current at 50 Hz/60 Hz in NO SIGNAL mode should be shown below with respect to supply voltage 110 V/127 V/220 V/240 V.

Power supply voltage	AC 110 V	AC 127 V	AC 220 V	AC 240 V
Consumed current 50 Hz	300~750 mA	270~680 mA	150~400 mA	130~360 mA
Consumed current 60 Hz	300~750 mA	270~680 mA	150~400 mA	130~360 mA

■ PROTECTION CIRCUITRY

The protection circuitry may have operated if either of the following conditions is noticed:
*No sound is heard when the power is switched ON.
*Sound stops during a performance.
The function of this circuitry is to prevent circuitry damage if, for example, the positive and negative speaker connection wires are "shorted", or if speaker systems with an impedance less than the indicated rated impedance of this unit are used.
If this occurs, follow the procedure outlined below:

1. Switch OFF the power.
2. Determine the cause of the problem and correct it.
3. Switch ON the power once again.

Note:
When the protection circuitry functions, the unit will not operate unless the power is first switched OFF and then ON again.

■ ACCESSORIES

- AC power supply cord 1
  Configuration of AC power supply cord differs according to area.

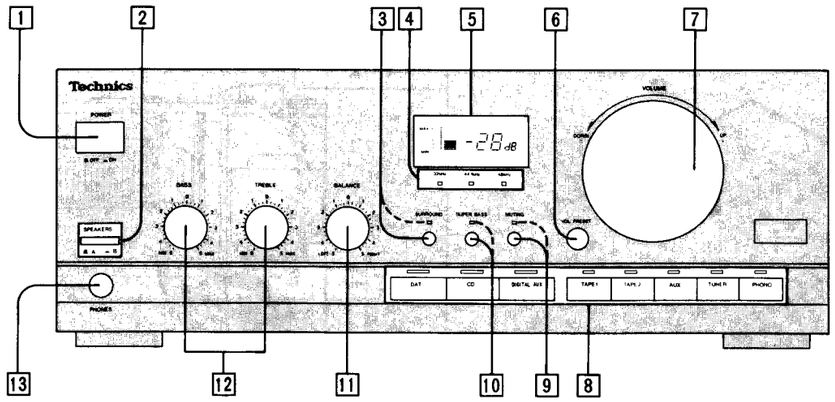
  SJA173 .....For (GN) area only.
  SJA188 .....For (EB) area only.
  RJA0004 .....For (GC) area only.
  SFDAC05E03 ....For others.

- Attachment AC plug 1

  SJP9215...For (GC) area only

■ LOCATION OF CONTROLS

●Front panel



1 **Power switch (POWER)**

2 **Speaker selector (SPEAKERS)**

3 **Surround-sound switch/indicator (SURROUND)**

4 **Sampling frequency indicators**

32 kHz: For digital signals with the 32 kHz mode sampling frequency
44.1 kHz: CD and others
48 kHz: For digital signals with the 48 kHz mode sampling frequency

5 **Volume-level indicator**

6 **Volume preset button (VOL PRESET)**

7 **Volume control (VOLUME)**

8 **Input selectors/indicators**

9 **Audio muting switch/indicator (MUTING)**

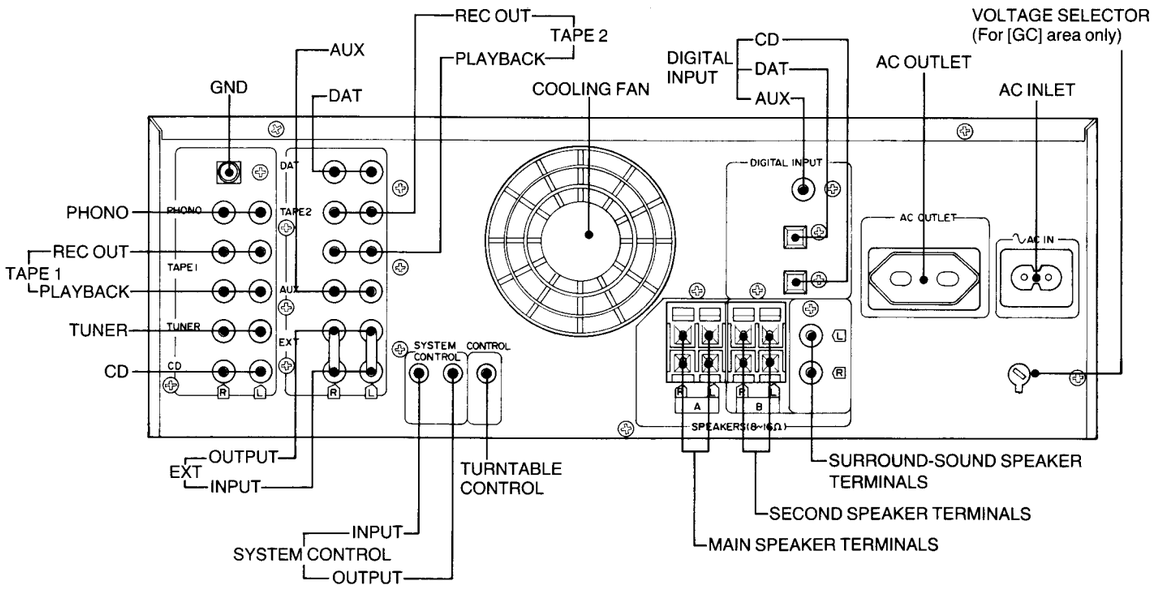
10 **Super bass switch/indicator (SUPER BASS)**

11 **Balance control (BALANCE)**

12 **Tone controls (BASS/TREBLE)**

13 **Headphones jack (PHONES)**

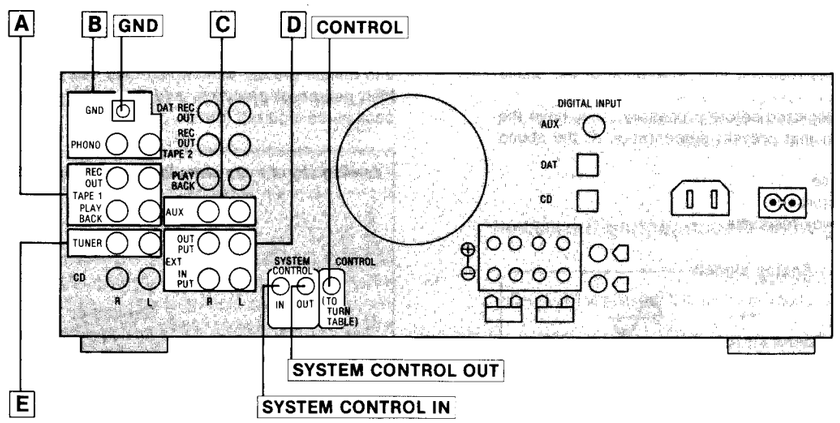
●Rear panel



*Phono input capacitance is about 270 pF for EG area (about 100 pF for other areas).

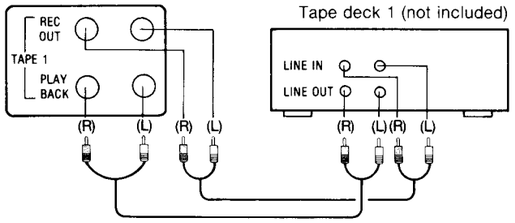
■ CONNECTIONS

Make connections to each component in the system by using stereo connection cables (not included).



A "TAPE 1" terminals

Connect a first tape deck.

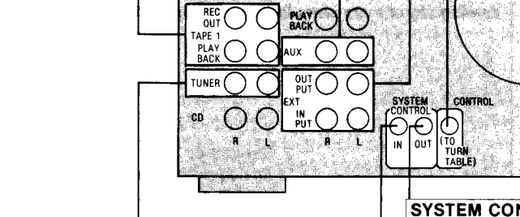


■ "SYSTEM CONTROL OUT" terminal

This terminal is used to connect a Technics tape deck with the control terminal.

B "PHONO" terminals

Connect a turntable.



■ "GND" terminal

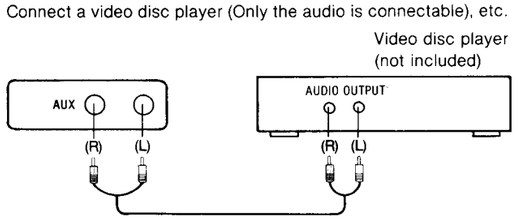
This terminal is for use with a turntable which has a ground wire.

■ "CONTROL" terminal

This terminal is used to connect a Technics turntable with the remote-control terminal.

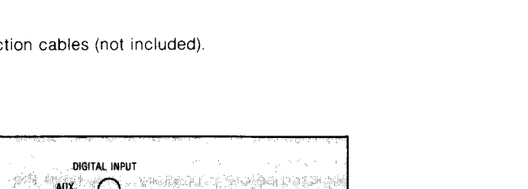
C "AUX" terminals

Connect a video disc player (Only the audio is connectable), etc.



D "EXT" terminals

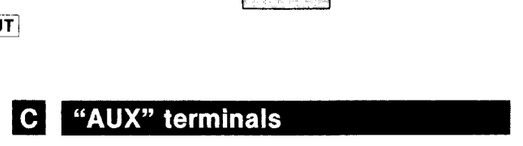
Connect a graphic equalizer.



Note:
When these terminals are not in use, be sure to insert the "shorting" pins (included).

E "TUNER" terminals

Connect a tuner.

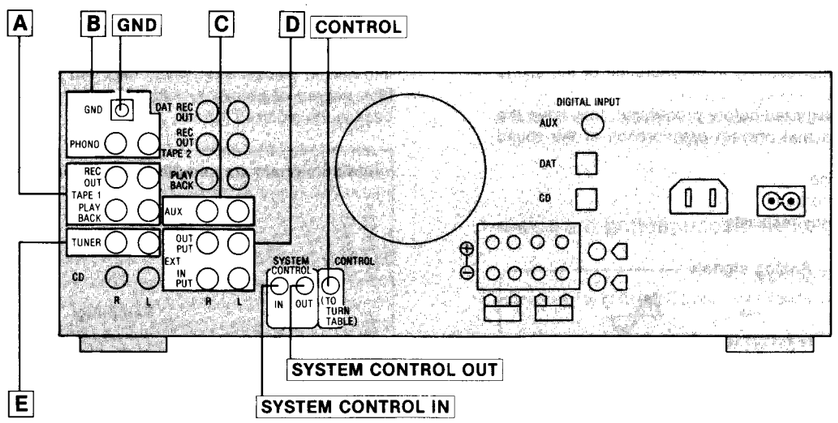


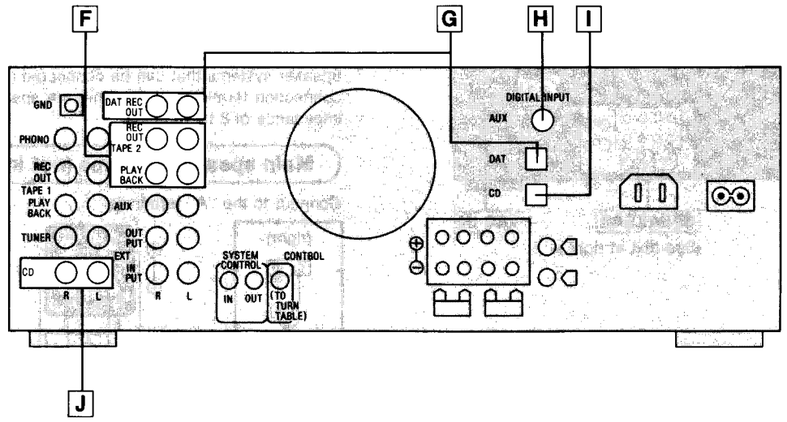
■ "SYSTEM CONTROL IN" terminal

This terminal is used to connect a Technics tuner with the control terminal.

■ CONNECTIONS

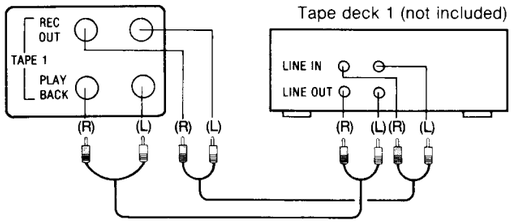
Make connections to each component in the system by using stereo connection cables (not included).





A "TAPE 1" terminals

Connect a first tape deck.

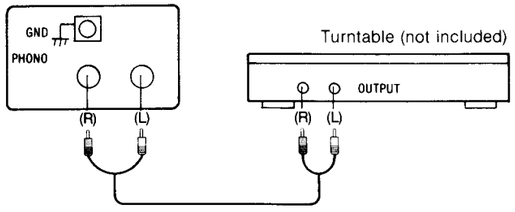


■ "SYSTEM CONTROL OUT" terminal

This terminal is used to connect a Technics tape deck with the control terminal.

B "PHONO" terminals

Connect a turntable.



■ "GND" terminal

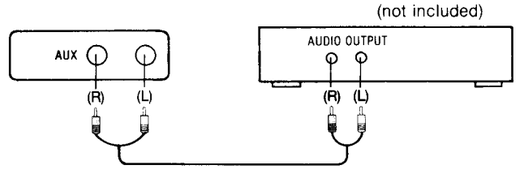
This terminal is for use with a turntable which has a ground wire.

■ "CONTROL" terminal

This terminal is used to connect a Technics turntable with the remote-control terminal.

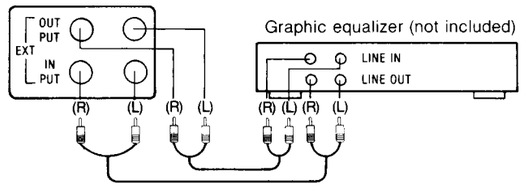
C "AUX" terminals

Connect a video disc player (Only the audio is connectable), etc.

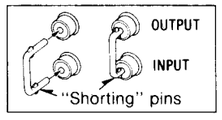


D "EXT" terminals

Connect a graphic equalizer.

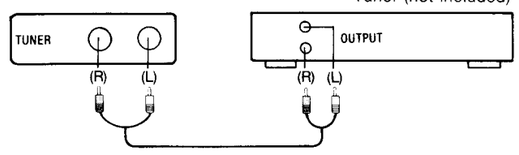


Note:
When these terminals are not in use, be sure to insert the "shorting" pins (included).



E "TUNER" terminals

Connect a tuner.

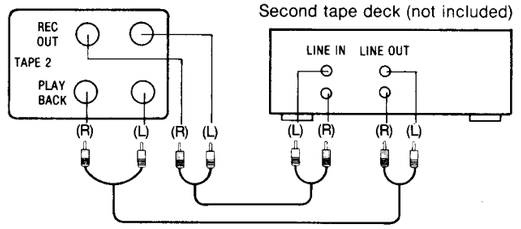


■ "SYSTEM CONTROL IN" terminal

This terminal is used to connect a Technics tuner with the control terminal.

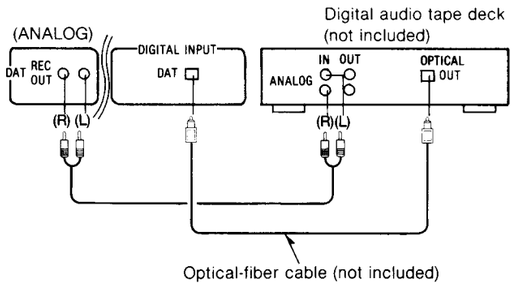
F "TAPE 2" terminals

Connect a video cassette recorder (for audio only) or a second tape deck.



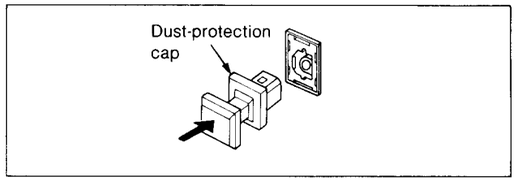
G "DAT" terminals (DIGITAL)

Connect a digital audio tape deck.
Recordings can be made to the digital audio tape deck.



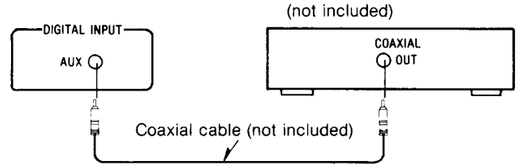
■ "DIGITAL INPUT" (DAT, CD) terminals of this unit

These terminals are protected by dust-protection caps to avoid damage by dust, etc.
Remove the caps only when the "DIGITAL INPUT" terminals are to be used.
When these terminals are not being used, attach the caps as shown in the illustration at the right.



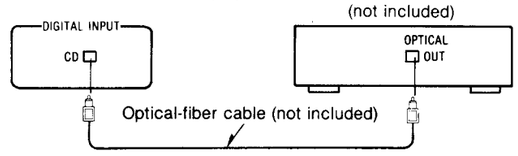
H "AUX" terminal (DIGITAL)

Connect a second compact disc player, etc.



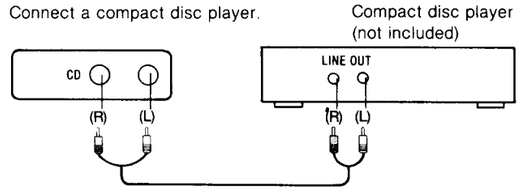
I "CD" terminal (DIGITAL)

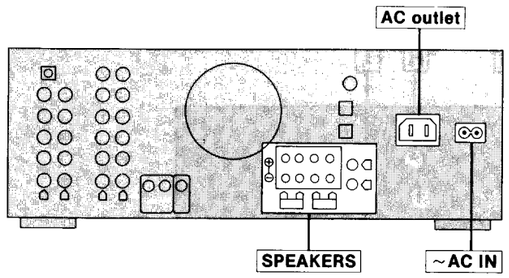
Connect a compact disc player.



J "CD" terminals (ANALOG)

Connect a compact disc player.





(See text at right.)

AC outlet ("AC OUTLET")

Do not connect video equipment (such as a TV, etc.) to the AC outlet of this unit. (This outlet is intended for audio equipment.) Do not exceed the indicated power ratings when connecting to this outlet.

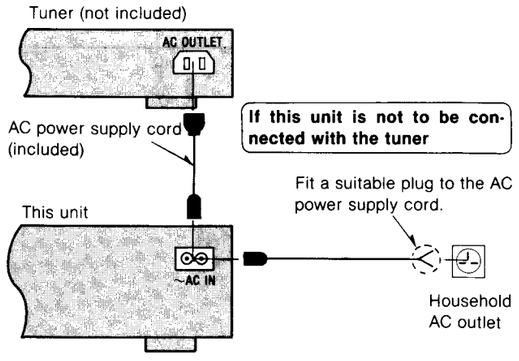
"UNSWITCHED" outlet:
Power is always available, regardless of power switch.
Audio equipment rated up to 60 W can be connected here.

Note:
The configuration of the AC outlet differs according to area.

AC power supply cord

Connect the AC power supply cord (included) after all other cables and cords are connected.

Note:
- Configuration of the AC outlet and AC power supply cord differ according to area.

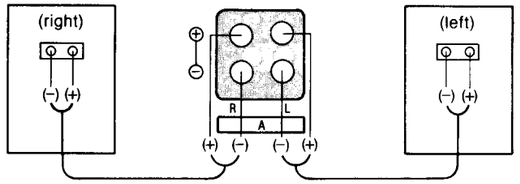

Tuner (not included)
AC OUTLET
AC power supply cord (included)
If this unit is not to be connected with the tuner
Fit a suitable plug to the AC power supply cord.
This unit
~AC IN
Household AC outlet

Connection of speaker systems

Three pairs of speaker systems (main, second, surround-sound) can be connected to this unit.
Speaker systems that can be connected (to any of the speaker connection terminals of this unit) are speaker systems with an impedance of 8 to 16 ohms.

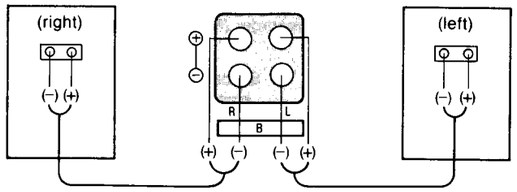
Main speaker systems (not included)

Connect to the "A" terminals.



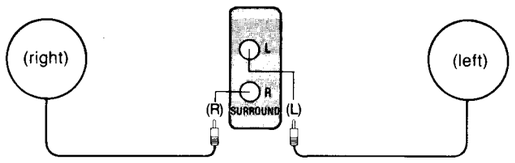
Second speaker systems (not included)

Connect to the "B" terminals.



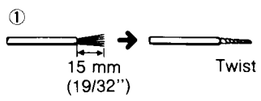
Surround-sound speaker systems (not included)

Connect to the "SURROUND" terminals.
- Be sure to connect both speaker systems. If only one side is connected, no sound will be heard.



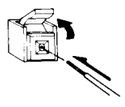
To connect cords to terminals

① Strip off the outer covering, and twist the center conductor.



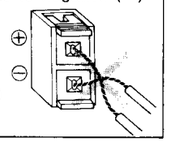
② Tilt the lever back and insert the cord.

③ Close the lever and pull the cord gently to be sure that it is secure.



Note:
Be sure to only connect positive (+) cords to positive (+) terminals, and negative (–) cords to negative (–) terminals.

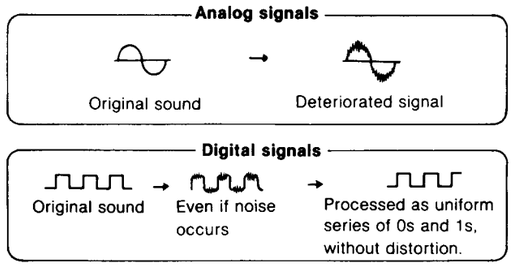
Note:
To prevent damage to circuitry, never short-circuit the plus (+) and minus (–) speaker cords.



■ DIGITALIZATION OF AUDIO SIGNALS

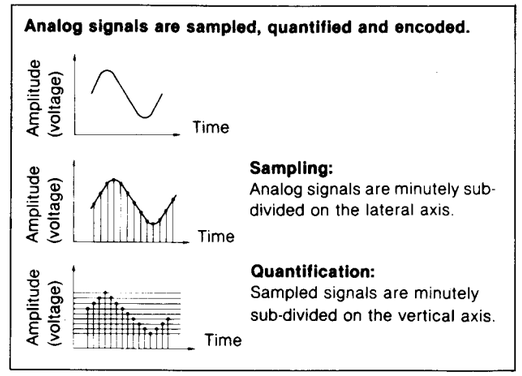
■ Why digitize?

- Audio signals are analog signals with a continuous form.
- When these audio signals are subjected to repeated electronic processing (recording, playback, etc.), they become noisy and distortion occurs, thus resulting in deterioration of the sound quality.
- If these signals are digitized before processing, they have the following advantages that prevent deterioration of the sound quality:
  ① Resistance to noise
  ② Extremely low distortion
  ③ Flat, even frequency response

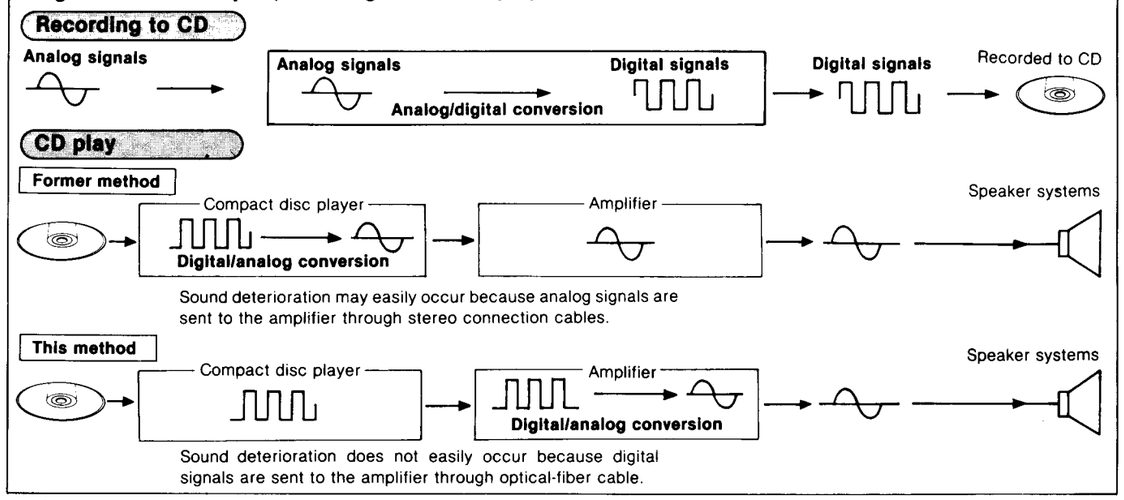


■ How signals are digitized

If it is known to what degree of minuteness the human ear can distinguish sounds, it is then possible, by using that data as the standard reference, to digitize signals by dividing analog signals into minute pieces, after which they can be transmitted with a high degree of precision, and thereafter recorded and played back in the digitized format.


Analog signals are sampled, quantified and encoded.
Amplitude (voltage)
Time
Sampling:
Analog signals are minutely sub-divided on the lateral axis.
Quantification:
Sampled signals are minutely sub-divided on the vertical axis.

Digitalization example (recording to CD and play of CD)



What the sampling frequencey is

The sampling frequency expresses the degree of minuteness to which signals can be sub-divided, relative to a certain specified time interval, during sampling.
For compact disc sound:
Analog signals are sub-divided 44,100 times (i.e., 44.1 kHz) during one second.
This 44.1 kHz is, therefore, the sampling frequency for compact disc sound.

What analog/digital conversion is

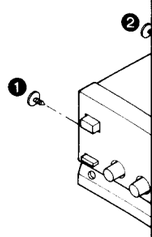
Audio signals (analog signals) are taken out (sampled) at certain fixed time intervals. The points at which this sampling frequency occurs are digitally encoded and converted to digital signals.

What digital/analog conversion is

Each sampling frequency point is returned (converted) to voltage, thus converting digital signals to the analog signals that we can hear.

■ DISASS

Ref. No. 1
Procedure 1

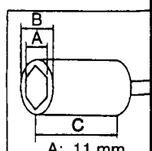


●Remove the 6 s

Ref. No. 3
Procedure 1→2→3

●Remove the 2 s

Ref. No. 4
Procedure 1→2→4



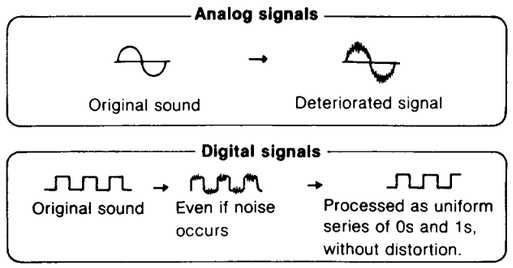
A: 11 mm
B: 16 mm
C: longer tha 22 mm

●Use a wrench o dimensions sho the illustration a to remove nuts.

■ DIGITALIZATION OF AUDIO SIGNALS

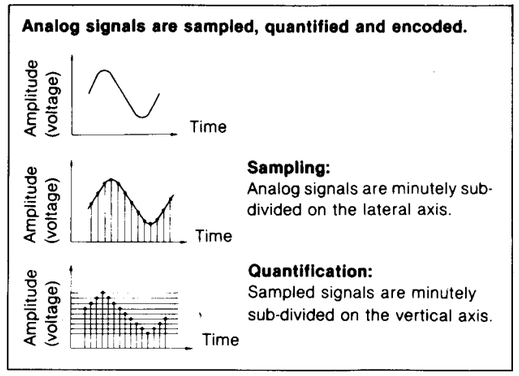
■ Why digitize?

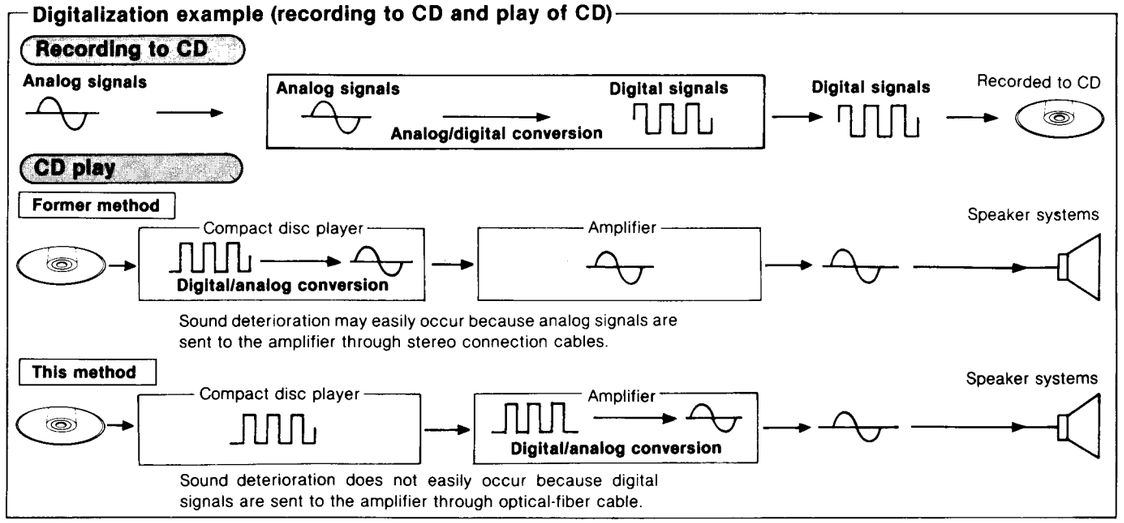
- Audio signals are analog signals with a continuous form.
- When these audio signals are subjected to repeated electronic processing (recording, playback, etc.), they become noisy and distortion occurs, thus resulting in deterioration of the sound quality.
- If these signals are digitized before processing, they have the following advantages that prevent deterioration of the sound quality:
  ① Resistance to noise
  ② Extremely low distortion
  ③ Flat, even frequency response



■ How signals are digitized

If it is known to what degree of minuteness the human ear can distinguish sounds, it is then possible, by using that data as the standard reference, to digitize signals by dividing analog signals into minute pieces, after which they can be transmitted with a high degree of precision, and thereafter recorded and played back in the digitized format.


Analog signals are sampled, quantified and encoded.
Amplitude (voltage)
Time
Sampling:
Analog signals are minutely sub-divided on the lateral axis.
Quantification:
Sampled signals are minutely sub-divided on the vertical axis.



What the sampling frequencey is

The sampling frequency expresses the degree of minuteness to which signals can be sub-divided, relative to a certain specified time interval, during sampling.
For compact disc sound:
Analog signals are sub-divided 44,100 times (i.e., 44.1 kHz) during one second.
This 44.1 kHz is, therefore, the sampling frequency for compact disc sound.

What analog/digital conversion is

Audio signals (analog signals) are taken out (sampled) at certain fixed time intervals. The points at which this sampling frequency occurs are digitally encoded and converted to digital signals.

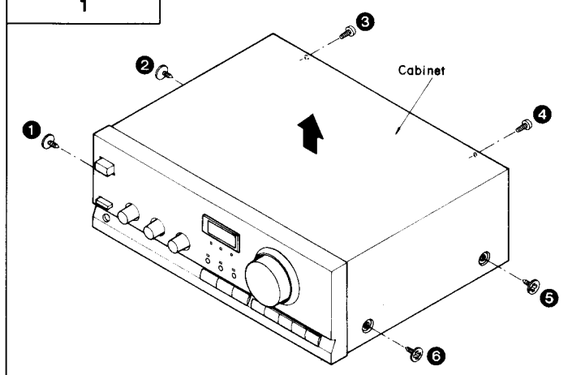
What digital/analog conversion is

Each sampling frequency point is returned (converted) to voltage, thus converting digital signals to the analog signals that we can hear.

■ DISASSEMBLY INSTRUCTIONS

Ref. No. 1 — **Removal of the Cabinet**

Procedure 1

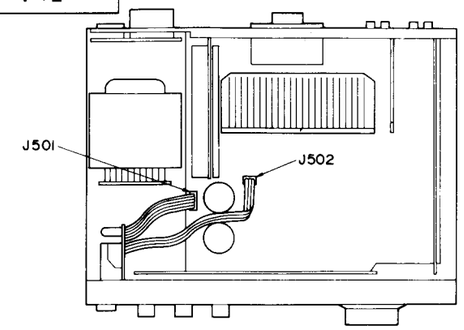


●Remove the 6 screws (❶~❻).

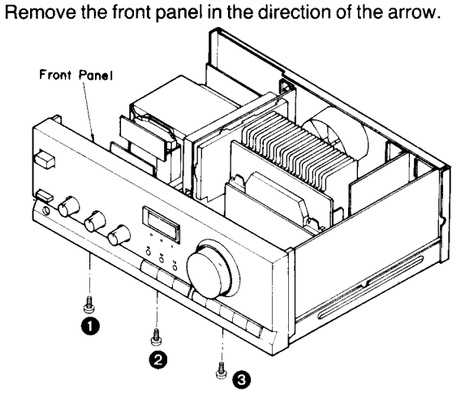
Ref. No. 2 — **Removal of the Front Panel**

Procedure 1→2

1. Remove the flat cables (J501, J502).

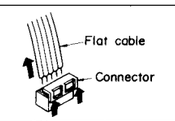


2. Remove the 3 screws (❶~❸).
3. Remove the front panel in the direction of the arrow.



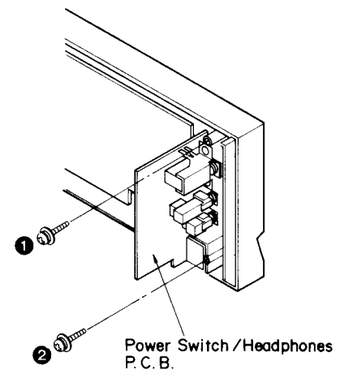
How to remove the flat cable

1. Lift the connector.
2. Pull out the flat cable.



Ref. No. 3 — **Removal of the Power Switch/ Headphones P.C.B.**

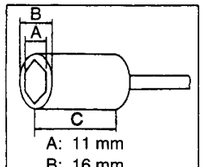
Procedure 1→2→3



●Remove the 2 screws (❶, ❷).

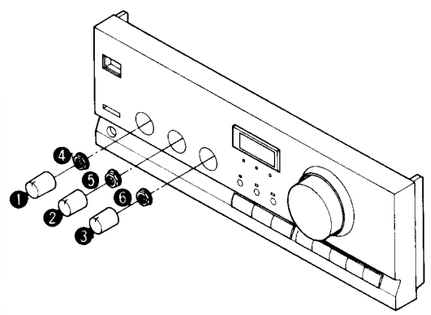
Ref. No. 4 — **Removal of the FL Drive P.C.B.**

Procedure 1→2→4

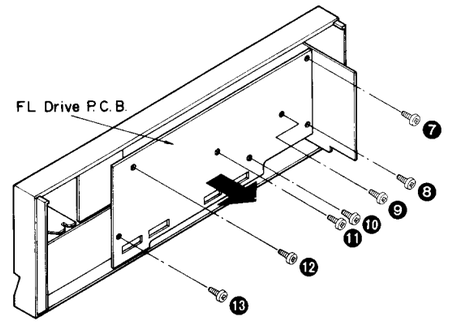


A: 11 mm
B: 16 mm
C: longer than 22 mm

●Use a wrench of the dimensions shown in the illustration above to remove nuts.



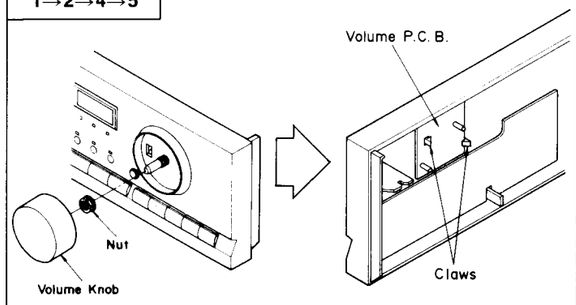
1. Pull out the 3 knobs (❶~❸).
2. Remove the 3 nuts (❹~❻).



3. Remove the 7 screws (❼~❿).

Ref. No. 5 — Removal of the Volume P.C.B.

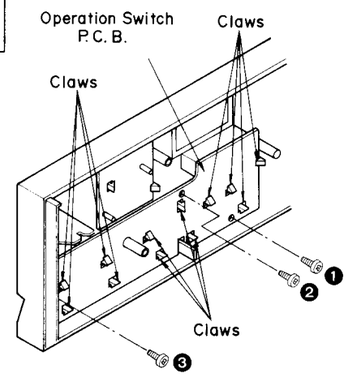
Procedure 1→2→4→5



1. Pull out the volume knob.
2. Remove the 1 nut.
3. Release the 2 claws.

Ref. No. 6 — Removal of the Operation Switch P.C.B.

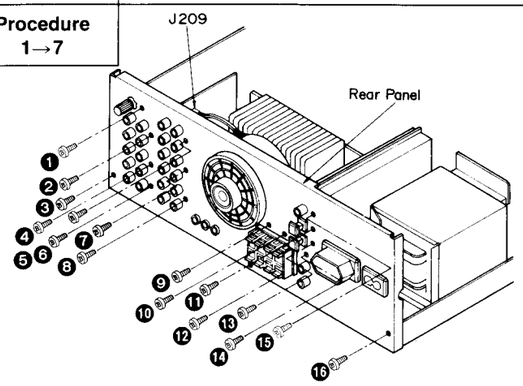
Procedure 1→2→4→6



1. Remove the 3 screws (❶~❸).
2. Release the 12 claws.

Ref. No. 7 — Removal of the Rear Panel

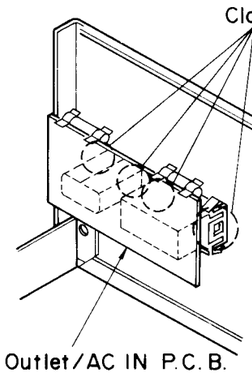
Procedure 1→7



1. Remove the 1 connector (J209).
2. Remove the 16 screws (❶~⓰).

Ref. No. 8 — Removal of the AC OUTLET/ AC IN P.C.B.

Procedure 1→7→8



●Release the 4 claws.

Ref. No. 9 — Removal of the D/A Converter P.C.B., PHONO/TAPE/TUNER/CD Terminal P.C.B. and INPUT/ OUTPUT Terminal P.C.B.

Procedure 1→7→9

■ Removal of the D/A Converter P.C.B.

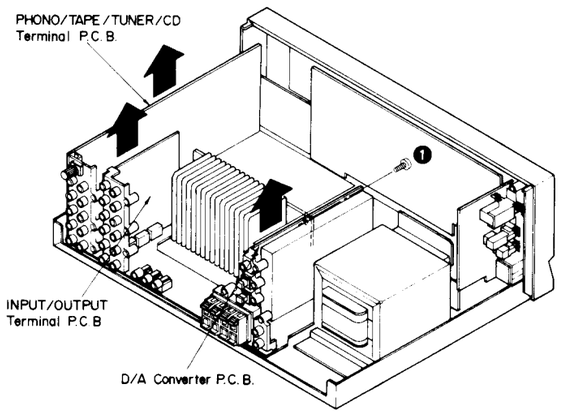
1. Remove the 1 screw (❶).
2. Remove the D/A Converter P.C.B. in the direction of the arrow.

■ Removal of the PHONO/TAPE/TUNER/CD Terminal P.C.B.

●Remove the PHONO/TAPE/TUNER/CD Terminal P.C.B. in the direction of the arrow.

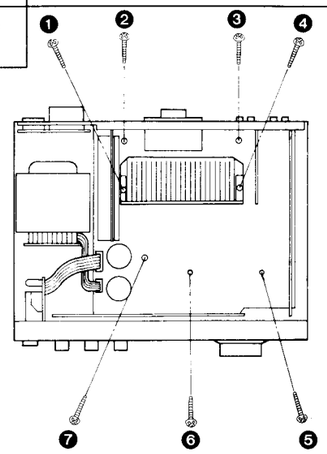
■ Removal of the INPUT/OUTPUT Terminal P.C.B.

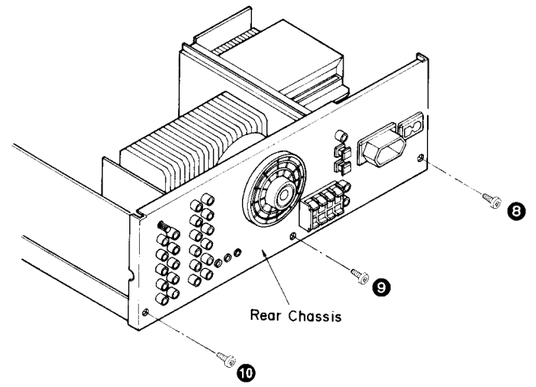
●Remove the INPUT/OUTPUT Terminal P.C.B. in the direction of the arrow.



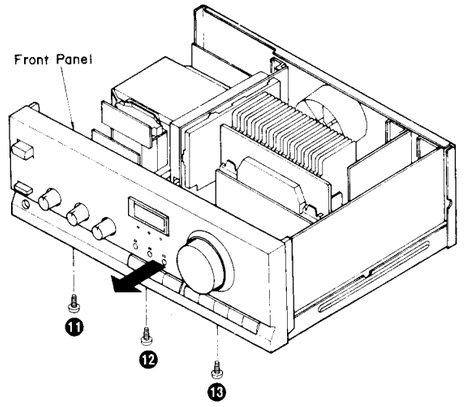
Ref. No. 10 — How to check the main P.C.B.

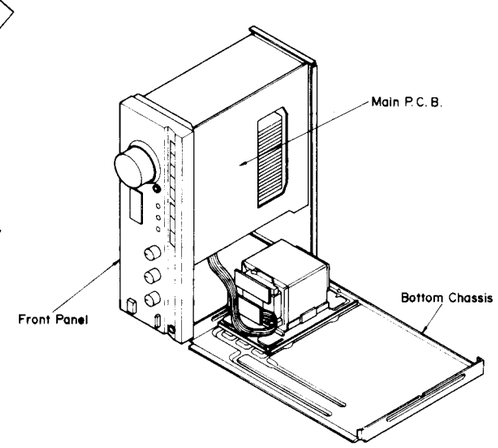
Procedure 1→10





1. Remove the 7 screws (❶~❼).
2. Remove the 3 screws (❽~❿).



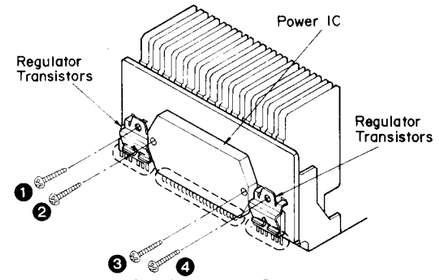


3. Remove the 3 screws (⓫~⓭).
4. Remove the front panel in the direction of the arrow.
   ※Connect 2 flat cables (J501. J502).
5. Remove the bottom chassis.
6. Reinstall the front panel to the main P.C.B.

Ref. No. 11 — Removal of the Power IC and Regulator Transistor

Procedure 1→10→11

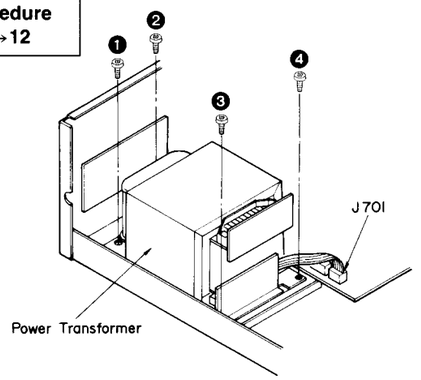
1. Unsolder the power IC or regulator transistor.
2. Remove the 4 screws (❶~❹).



Note: When mounting the power IC, or regulator transistor apply silicon terminal compound (SZZ0L15) to the rear of the power IC or regulator transistor.

Ref. No. 12 — Removal of the Power Transformer

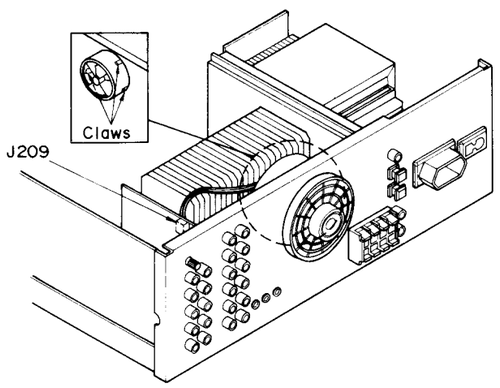
Procedure 1→12

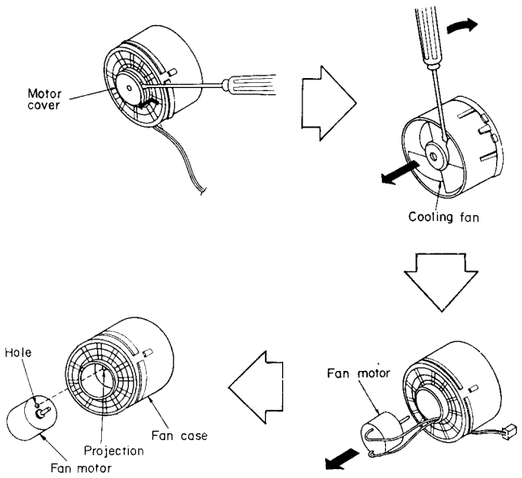


1. Remove the 1 flat cable (J701).
2. Remove the 4 screws (❶~❹).

Ref. No. 13	Removal of the Fan Motor
Procedure 1→13	1. Remove the 1 connector (J209). 2. Release the 3 claws.

4. Insert a screwdriver at the root of the cooling fan. Force it out of the motor shaft.
5. Remove the motor cover by used ⊖ screwdriver.
6. Remove the motor from the fan casing.
7. When mounting the motor fan, align the fan casing's projection with the hole of the fan motor.

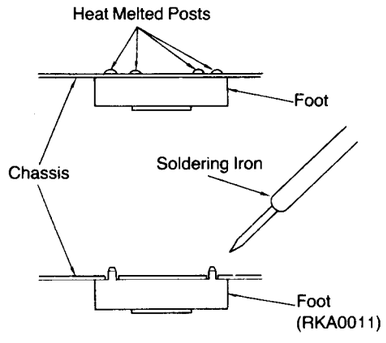




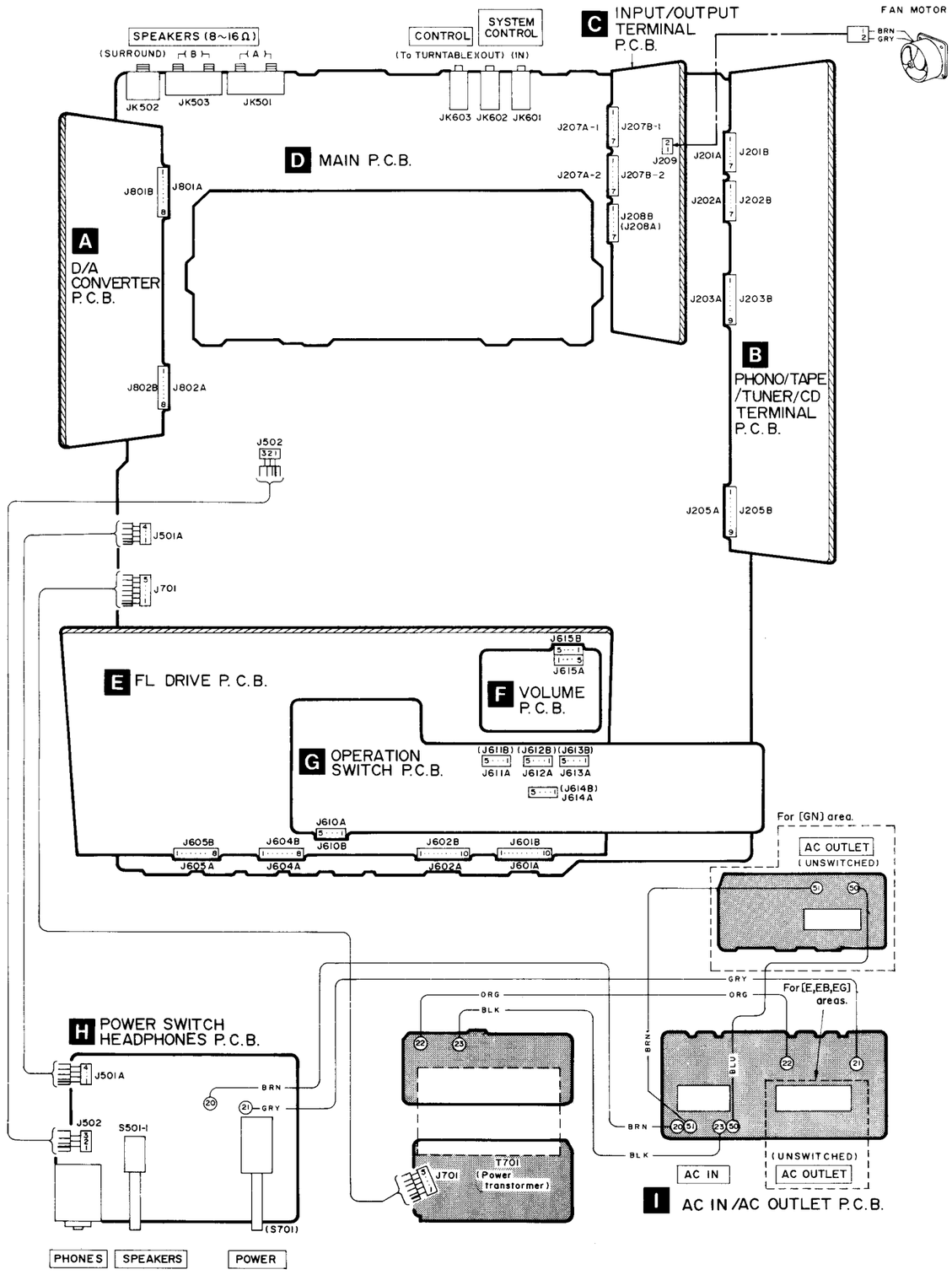
"ATTENTION SERVICER"
Some chassis components may have sharp edges. Be careful when disassembling and servicing.

●Replacement of the Foot.

1. Remove the 4 heat melted posts on the chassis with a pair of nippers or similar tool.
2. To replace the foot (RKA0011) on the chassis, melt the 4 posts with a soldering iron.



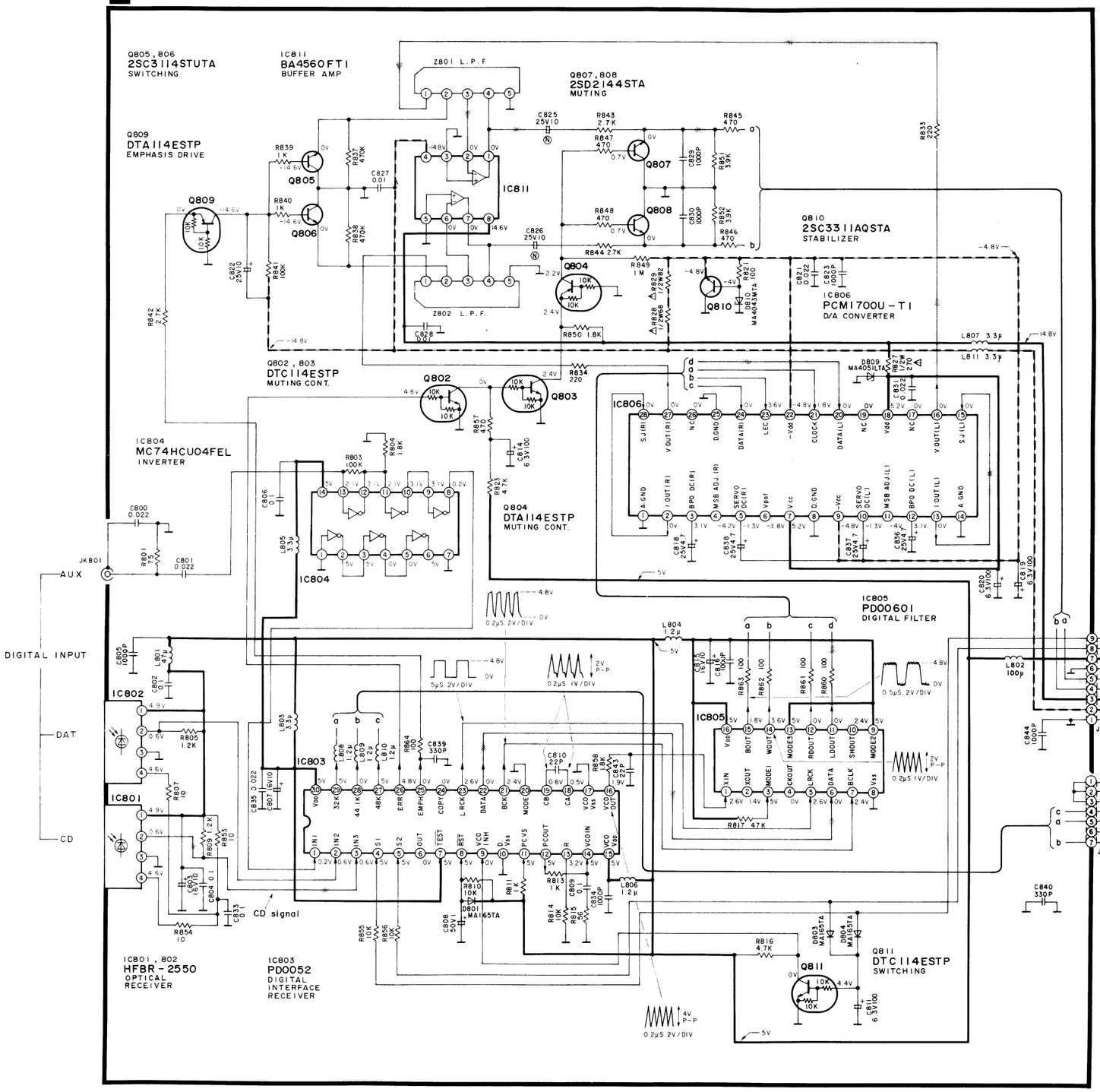
■ WIRING CONNECTION DIAGRAM



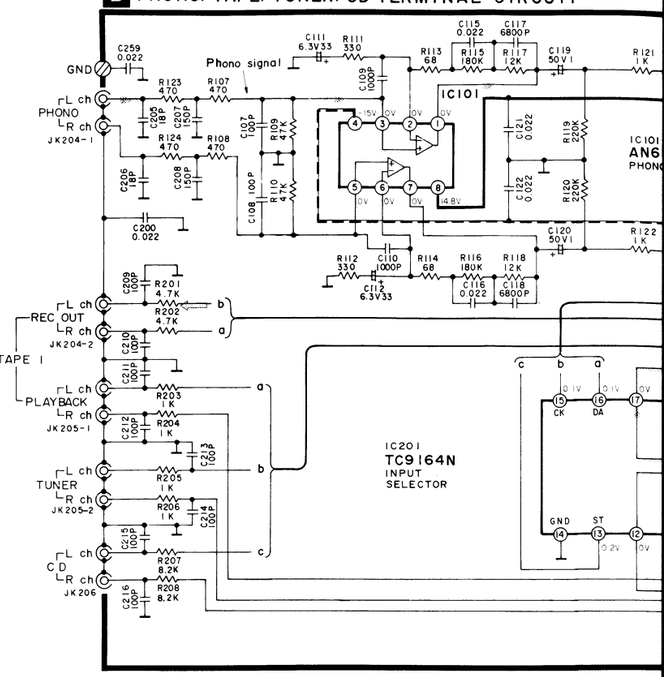
■ SCHEMATIC DIAGRAM

(Parts list on pages 32~34, 38~40)

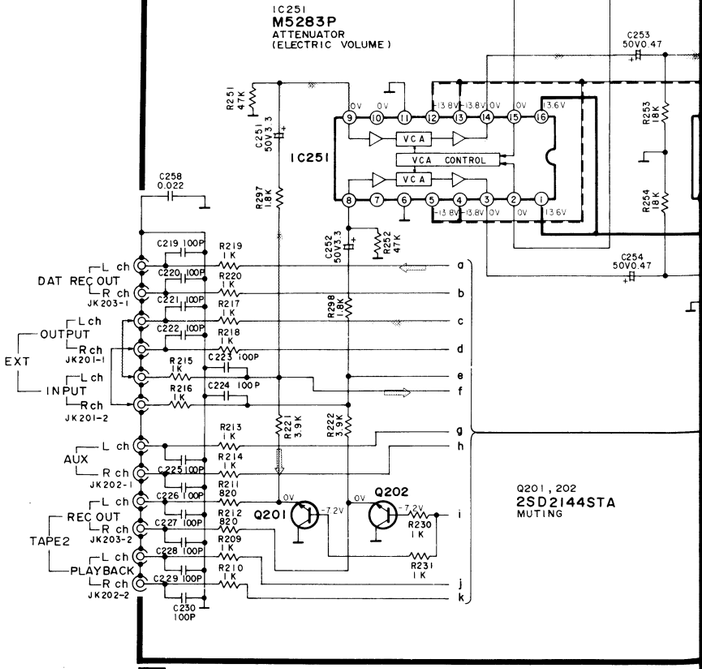
A D/A CONVERTER CIRCUIT



B PHONO/TAPE/TUNER/CD TERMINAL CIRCUIT



C INPUT OUTPUT TERMINAL CIRCUIT



D TERMINAL CIRCUIT

IC101
AN6558SFE2
PHONO EQ AMP

IC201
TC9164N
INPUT SELECTOR

IC301
AN6558SFE2
PHASE SHIFT

IC303
BA4560FT1
BUFFER AMP

IC302
AN6554NSFE2
MIXING/ PHASE SHIFT

Phase difference signal

Q303
DTA114ESTP
SWITCHING CONT. (SURROUND)

Q301
2SD2144STA
SWITCHING (SURROUND)

Q403
DTA114ESTP
SWITCHING CONT. (SUPER BASS)

Q401, 402
2SD2144STA
SWITCHING (SUPER BASS)

IC402
AN6554NSFE2
PRE/B.P.F.AMP

Q206
2SA1309AQSTA
REGULATOR

IC252
AN6558SFE2
BUFFER AMP

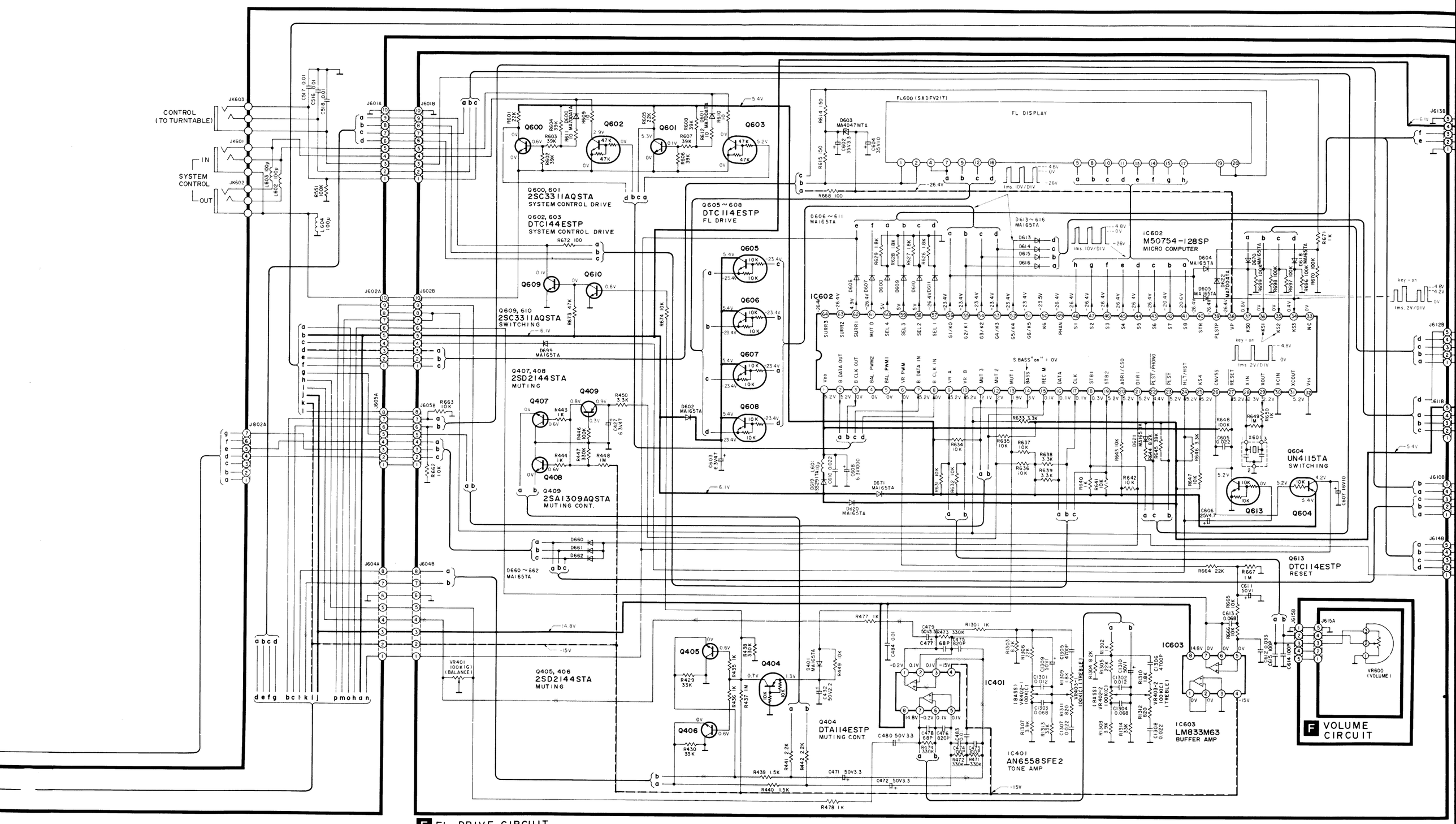
Q205
2SC3311AQSTA
REGULATOR

Q201, 202
2SD2144STA
MUTING

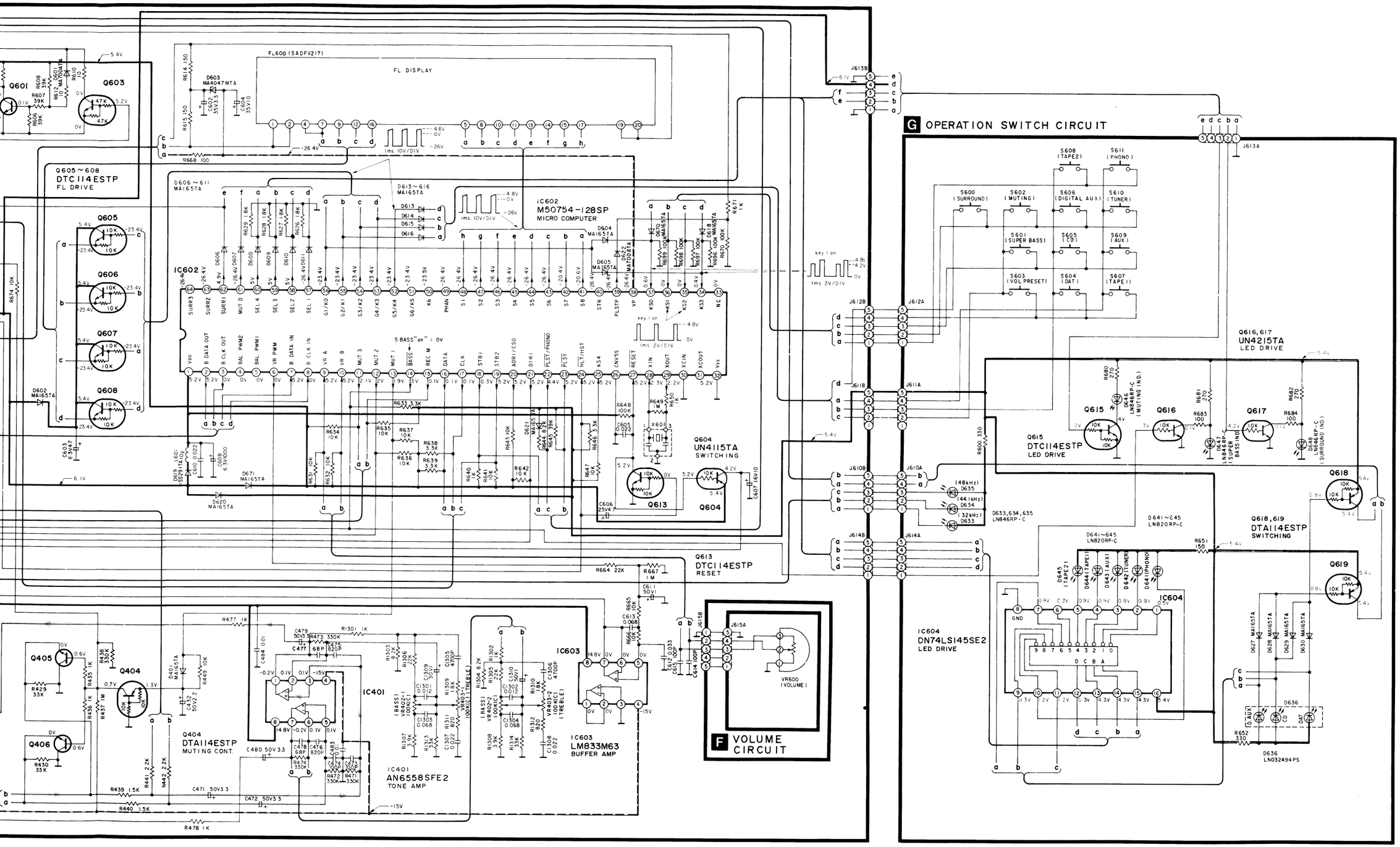
Q203
DTA114ESTP
MUTING CONT.

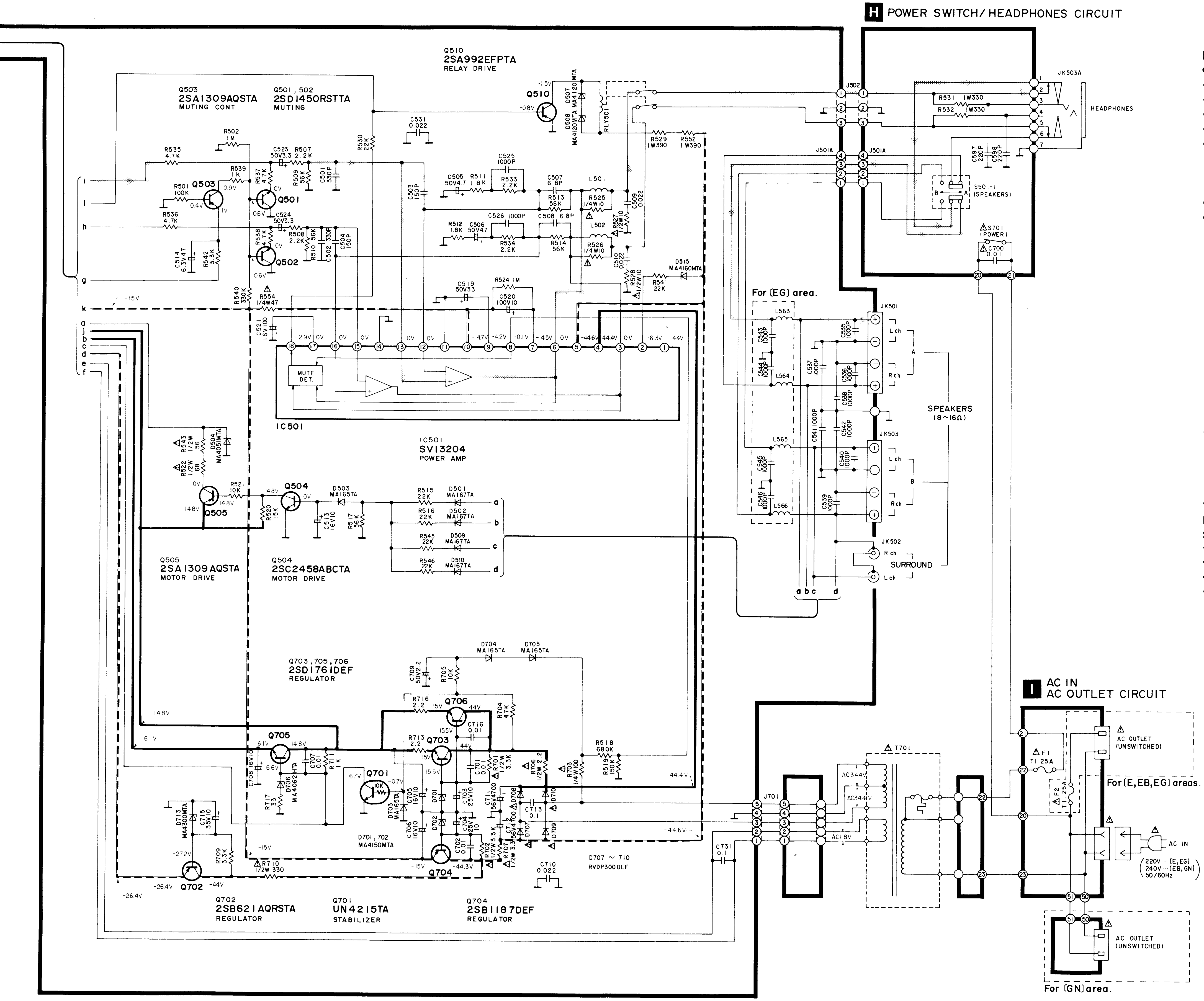
MOTOR

D MAIN CIRCUIT


CONTROL (TO TURNTABLE)
IN
SYSTEM CONTROL
OUT
JK603
JK601
JK602
Q600, 601
2SC3311AQSTA
SYSTEM CONTROL DRIVE
Q602, 603
DTC144ESTP
SYSTEM CONTROL DRIVE
Q609, 610
2SC3311AQSTA
SWITCHING
Q605~608
DTC114ESTP
FL DRIVE
Q407, 408
2SD2144STA
MUTING
Q409
2SA1309AQSTA
MUTING CONT.
Q405, 406
2SD2144STA
MUTING
Q404
DTA114ESTP
MUTING CONT.
FL600 (SADFV217)
FL DISPLAY
IC602
M50754-128SP
MICRO COMPUTER
Q604
UN4115TA
SWITCHING
Q613
DTC114ESTP
RESET
IC603
LM833M63
BUFFER AMP
IC401
AN6558SFE2
TONE AMP
VR401 100K(G) (BALANCE)
VR600 (VOLUME)
F VOLUME CIRCUIT
E FL DRIVE CIRCUIT

25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35





Notes:

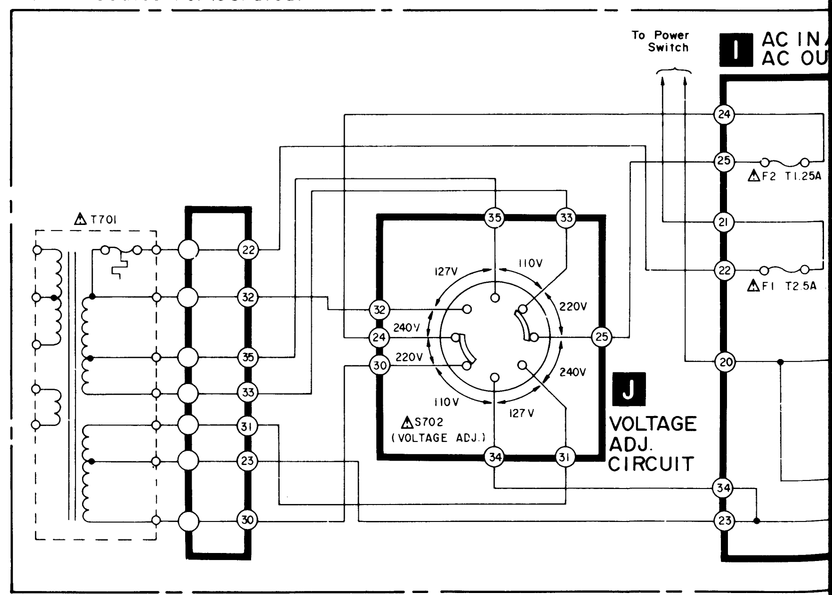
•S501-1	: Speaker selector switch in "**A**" position.
•S600	: Surround-sound switch in "**OFF**" position.
•S601	: Super bass switch in "**OFF**" position.
•S602	: Audio muting switch in "**OFF**" position.
•S603	: Volume preset switch in "**OFF**" position.
•S604~S611	: Input selector switches.
	(**S604: DAT, S605: CD, S606: DIGITAL AUX** **S607: TAPE1, S608: TAPE 2, S609: AUX** **S610: TUNER, S611: PHONO**)
•S701	: Power switch in "**ON**" position.
•S702	: Voltage selector switch in "**220 V**" position. **(110 V/127 V/220 V/240 V)** For (GC) area only.

Positive voltage lines (+)
Negative voltage lines (−)
CD signal (Lch), Phono signal (Lch)
Recording signal
Super bass signal
Phase difference signal

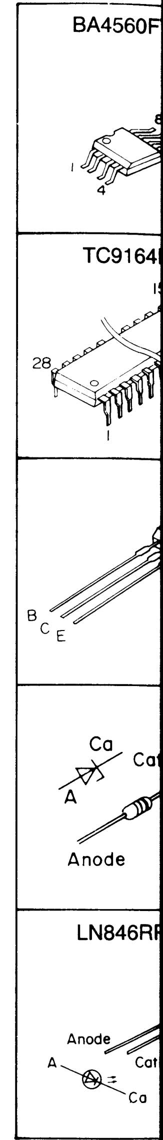
- Indicated voltage values are the standard values for the unit measured by the DC electronic circuit tester (high-impedance) with the chassis taken as standard. Therefore, there may exist some errors in the voltage values, depending on the internal impedance of the DC circuit tester.
- Important safety notice:
  Components identified by ⚠ mark have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.

***Caution!**
IC and LSI are sensitive to static electricity.
Secondary trouble can be prevented by taking care furing repair.
*Cover the parts boxes made of plastics with aluminum foil.
*Ground the soldering iron.
*Put a conductive mat on the work table.
*Do not touch the legs of IC or LSI with the fingers directly.

Power Source For (GC) area.

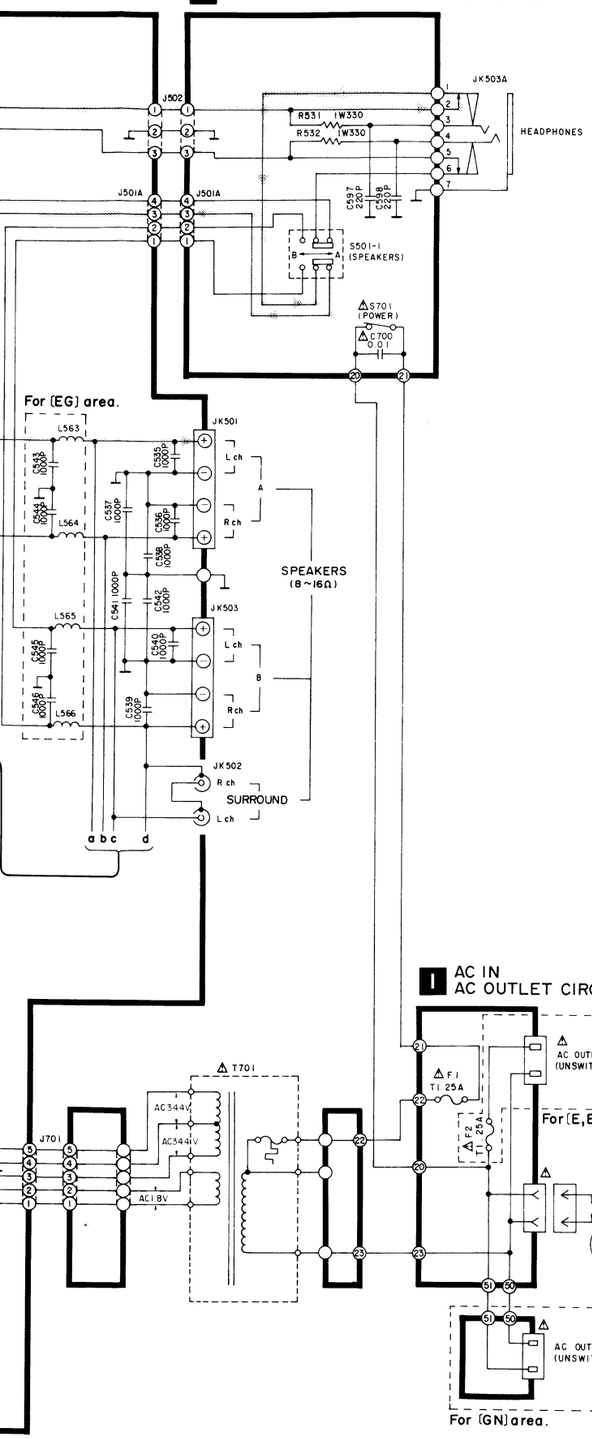


■ TERM

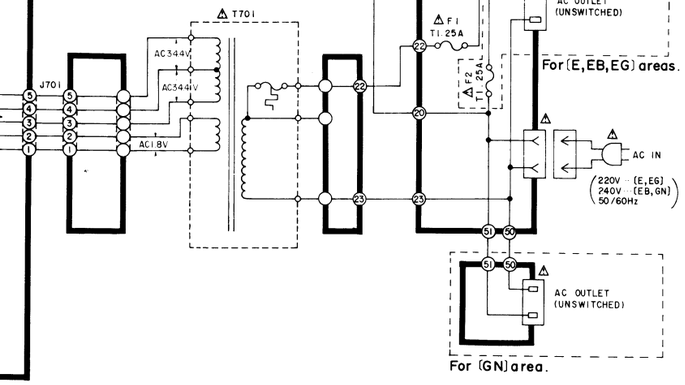


40 41 42 43 44

H POWER SWITCH/ HEADPHONES CIRCUIT



I AC IN AC OUTLET CIRCUIT



Notes:

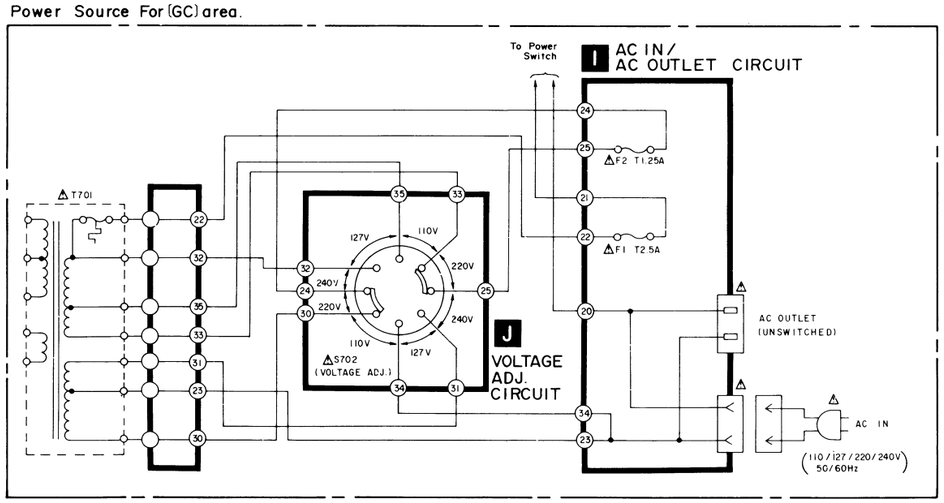
- **•S501-1** : Speaker selector switch in **"A"** position.
- **•S600** : Surround-sound switch in **"OFF"** position.
- **•S601** : Super bass switch in **"OFF"** position.
- **•S602** : Audio muting switch in **"OFF"** position.
- **•S603** : Volume preset switch in **"OFF"** position.
- **•S604~S611** : Input selector switches.
  S604: DAT, S605: CD, S606: DIGITAL AUX
  S607: TAPE1, S608: TAPE 2, S609: AUX
  S610: TUNER, S611: PHONO
- **•S701** : Power switch in **"ON"** position.
- **•S702** : Voltage selector switch in **"220 V"** position. **(110 V/127 V/220 V/240 V)** For (GC) area only.

Positive voltage lines (+)
Negative voltage lines (−)
CD signal (Lch), Phono signal (Lch)
Recording signal
Super bass signal
Phase difference signal

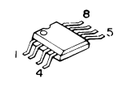
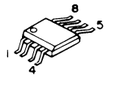
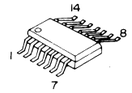
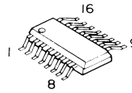
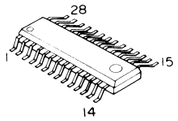
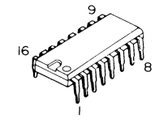
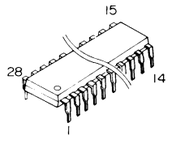
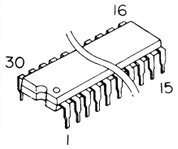
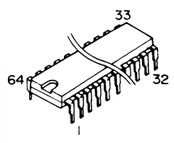
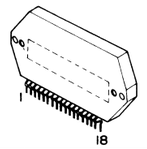
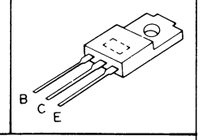
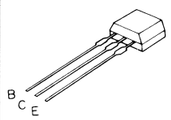
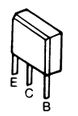
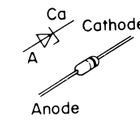
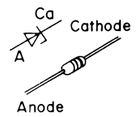
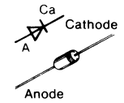
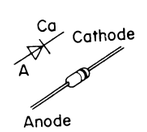
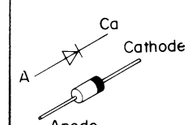
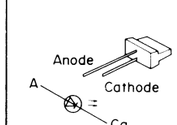
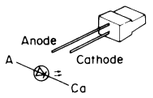
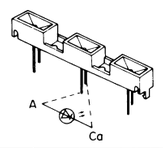
- •Indicated voltage values are the standard values for the unit measured by the DC electronic circuit tester (high-impedance) with the chassis taken as standard. Therefore, there may exist some errors in the voltage values, depending on the internal impedance of the DC circuit tester.
- •Important safety notice:
  Components identified by ⚠ mark have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.

•Caution!
IC and LSI are sensitive to static electricity.
Secondary trouble can be prevented by taking care furing repair.
•Cover the parts boxes made of plastics with aluminum foil.
•Ground the soldering iron.
•Put a conductive mat on the work table.
•Do not touch the legs of IC or LSI with the fingers directly.

Power Source For (GC) area.

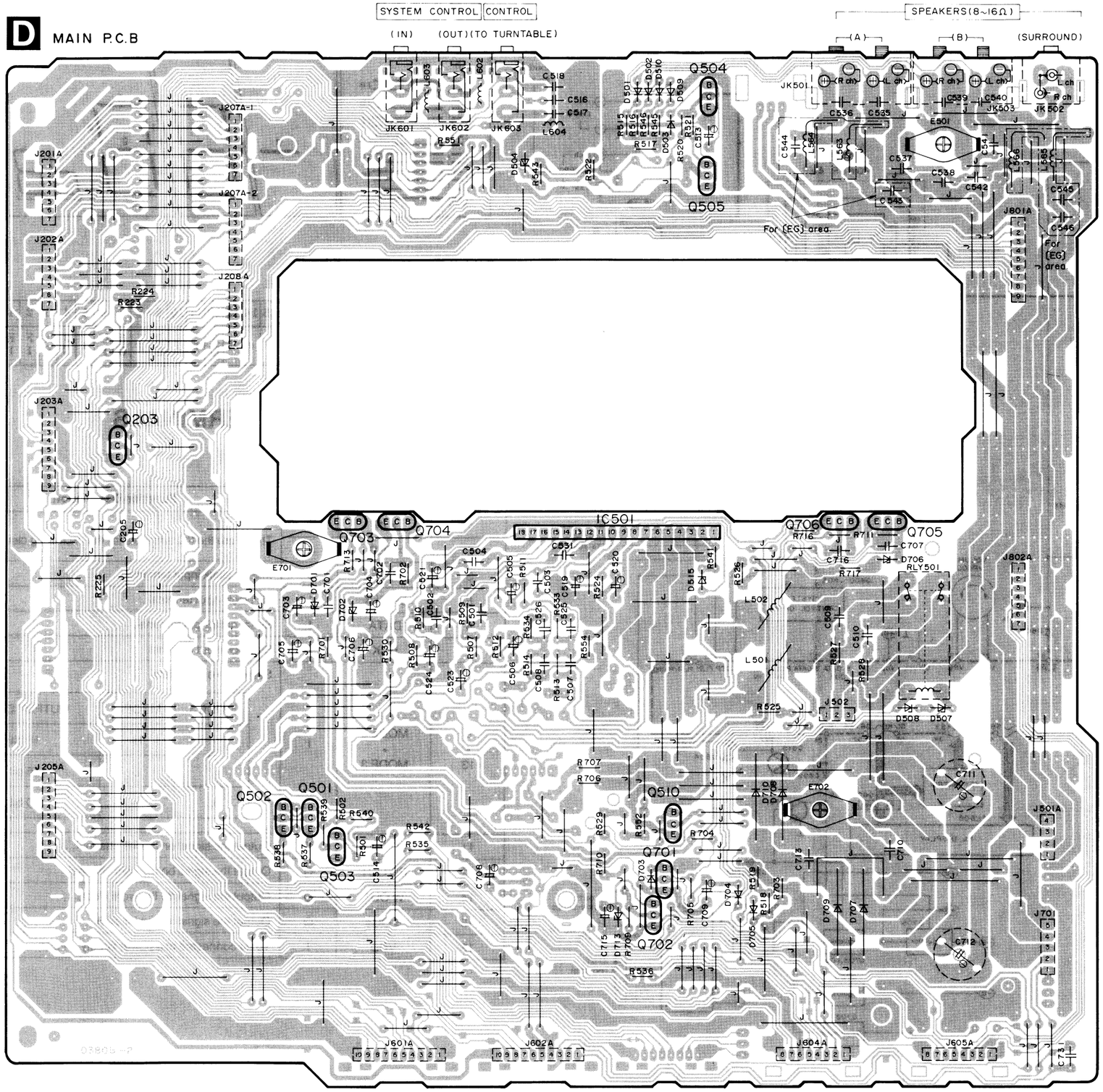


■ TERMINAL GUIDE OF IC'S, TRANSISTORS AND DIODES

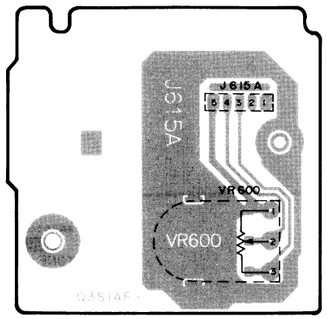
BA4560FT1 	AN6558SFE2 BA4560FT1 LM833M63 	AN6554NSFE2 MC74HCU04FEL 	DN74LS145SE2 PD00601 	PCM1700U-T1 	M5283P 
TC9164N 	PD0052 	M50754-128SP 	SVI3204 	2SA992EFPTA 2SB621AQRSTA 2SC3114STUTA	2SB1187DEF 2SD1761DEF 
	2SC2458ABCTA 2SD2144STA DTA114ESTP DTC114ESTP DTC144ESTP		2SA1309AQSTA 2SC3311AQSTA 2SD1450RSTTA UN4115TA UN4215TA		MA4120MTA MA4150MTA MA4160MTA MA4300MTA
	MA4043MTA MA4047MTA MA4051MTA MA4062HTA MA5051LTA	MA165TA MA167TA 1SS291TA 	MA700ATA 	RVDP300DLF 	LN820RP-C 
LN846RP-C 	LN038494PS 				

■ PRINTED CIRCUIT BOARDS (Parts list: pages 32~34, 38~40; Wiring connection diagram: page 12)

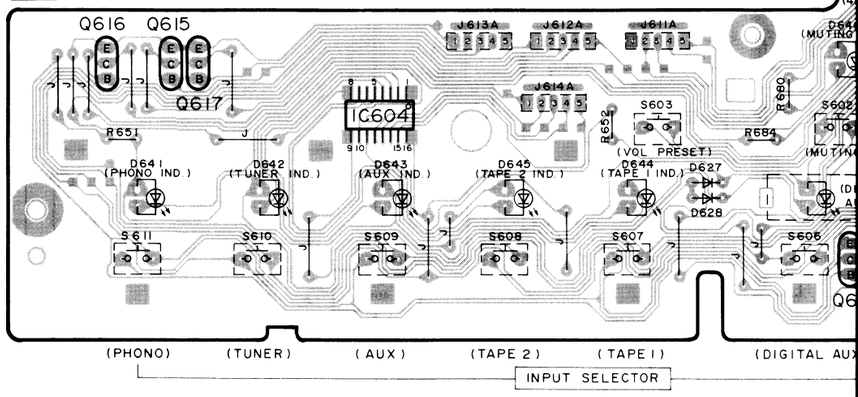
D MAIN P.C.B



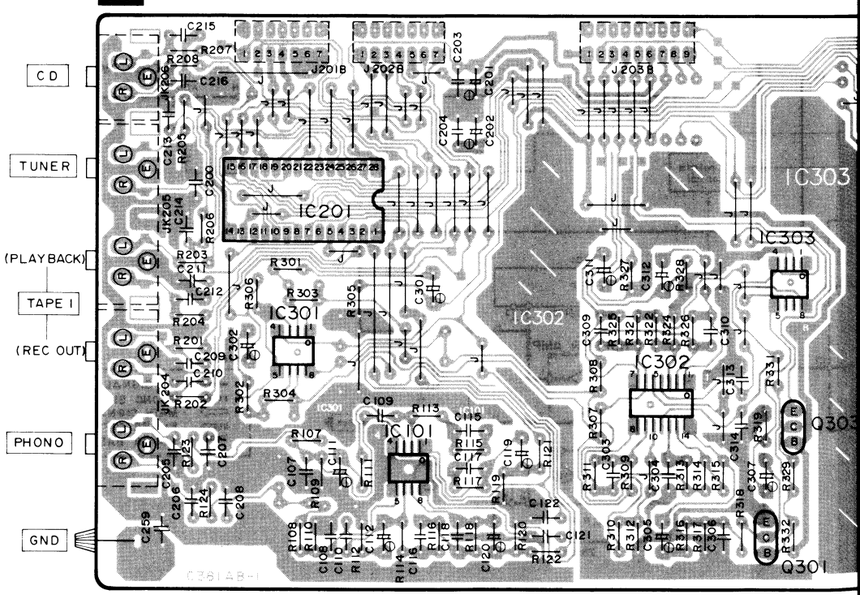
F VOLUME P.C.B.



G OPERATION SWITCH P.C.B.



B PHONO/TAPE/TUNER/CD TERMINAL P.C.B.



SPEAKERS(8~16Ω)

(A) (B) (SURROUND)

(R ch) (L ch) (R ch) (L ch) L ch R ch

C536 C535 C539 C540 JK503 JK502

E301 L503 C544 L504 L505

C537 C538 C542 C543 C545 C546

J801A

reg. For (EG) reg.

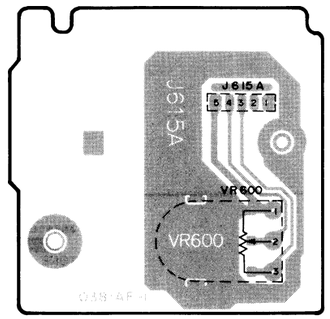
Q705 R711 C707 C716 D706 R717 RLY501 J802A

C508 C510 R527 R528 J502 D508 D507

C711 D709 D707 C712 J701

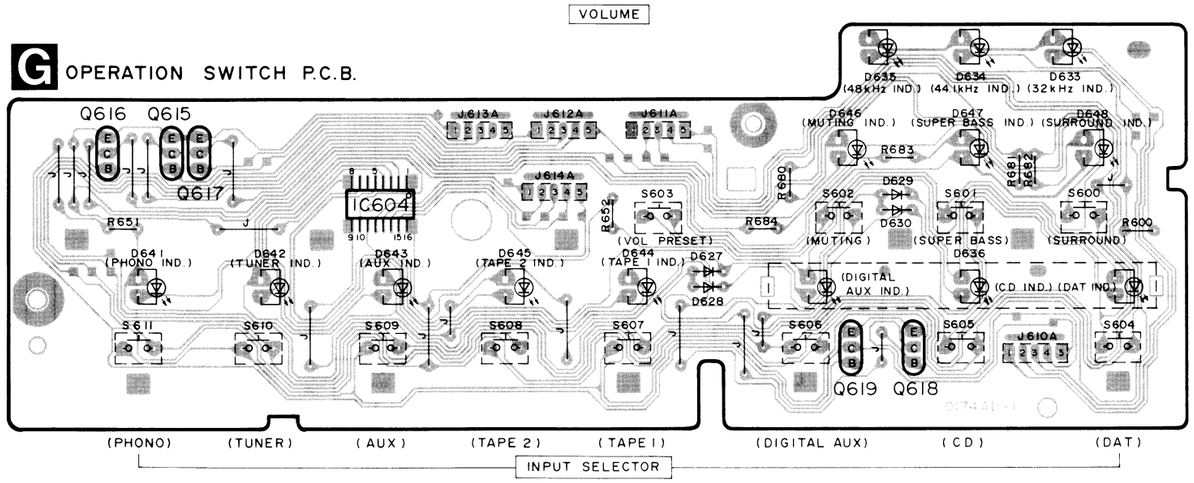
J605A C731

F VOLUME P.C.B.

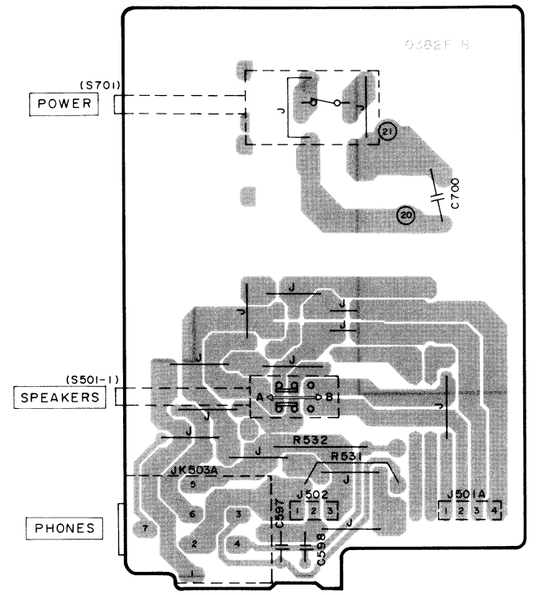


VOLUME

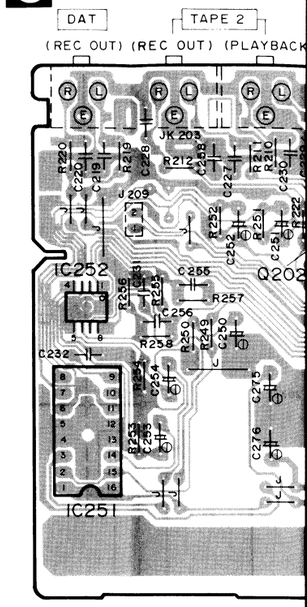
G OPERATION SWITCH P.C.B.


Q616 Q615
Q617
J613A J612A J611A
J614A
IC604
S603 (VOL PRESET)
D635 (48kHz IND.) D634 (44.1kHz IND.) D633 (32kHz IND.)
D646 (MUTING IND.) D647 (SUPER BASS IND.) D648 (SURROUND IND.)
R683 R680 R681 R682
S602 (MUTING) D629 D630 S601 (SUPER BASS) S600 (SURROUND) R600
D641 (PHONO IND.) D642 (TUNER IND.) D643 (AUX IND.) D645 (TAPE 2 IND.) D644 (TAPE 1 IND.) D627 D628
D636 (DIGITAL AUX IND.) (CD IND.) (DAT IND.)
S611 S610 S609 S608 S607 S606 S605 S604
J610A
Q619 Q618
(PHONO) (TUNER) (AUX) (TAPE 2) (TAPE 1) (DIGITAL AUX) (CD) (DAT)
INPUT SELECTOR

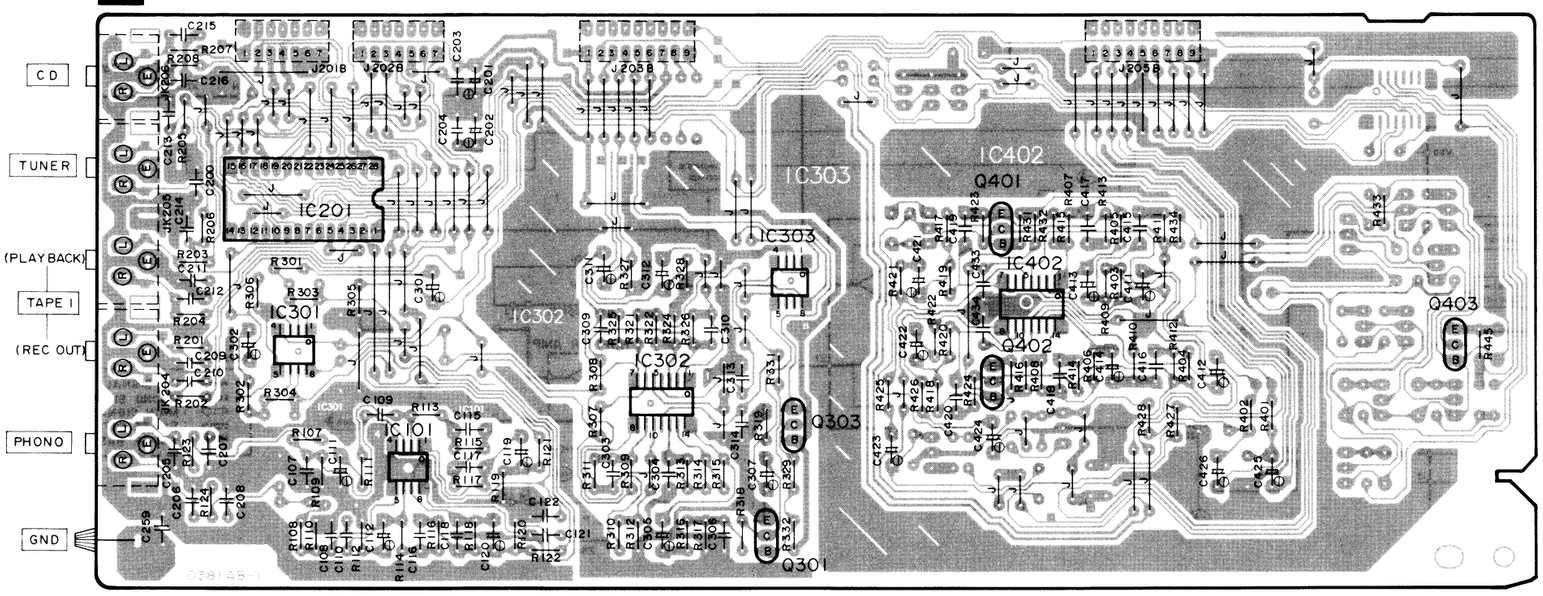
H POWER SWITCH/HEADPHONES P.C.B.



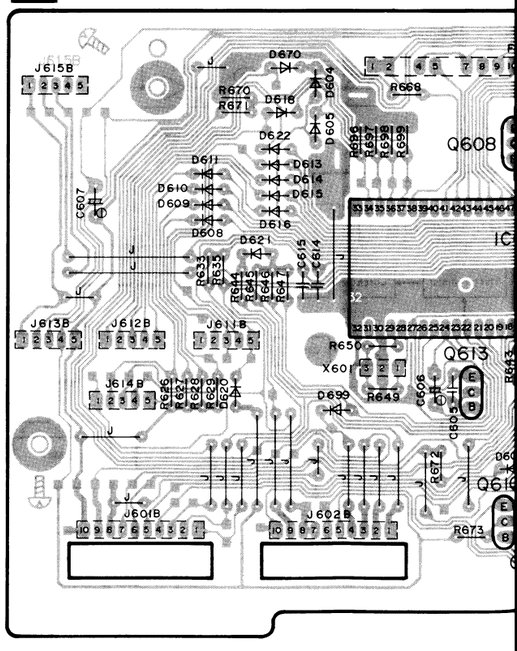
C INPUT/OUTPUT TERM



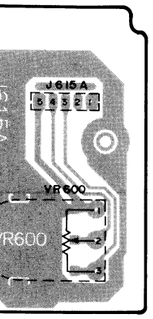
B PHONO/TAPE/TUNER/CD TERMINAL P.C.B.



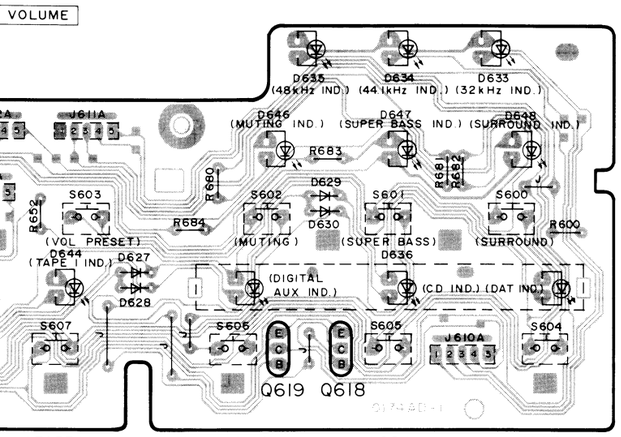
E FL DRIVE P.C.B.



P.C.B.



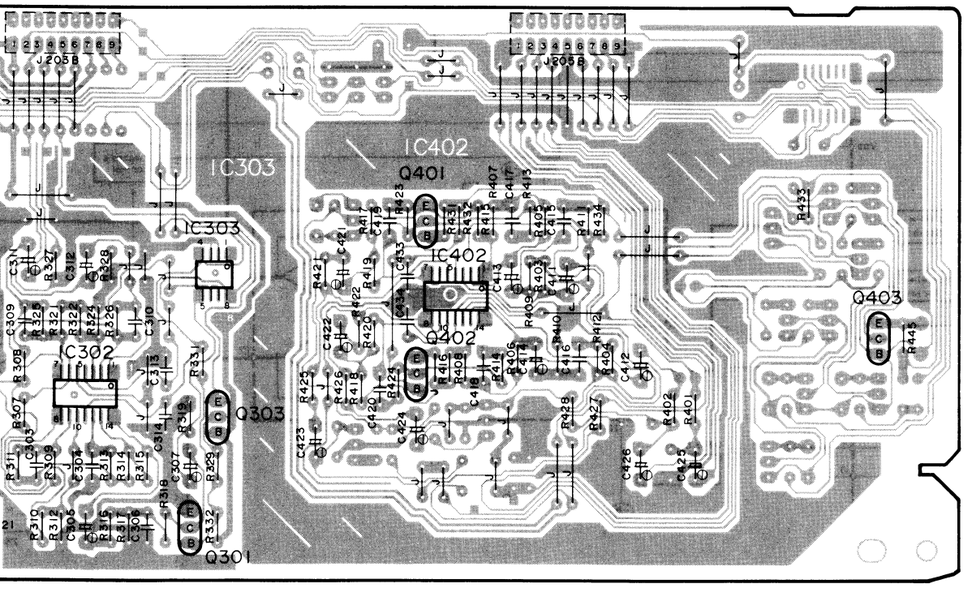
VOLUME



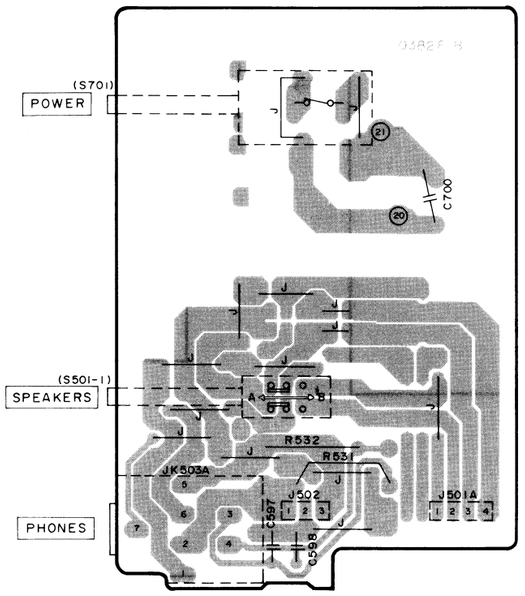
(TAPE 1) (DIGITAL AUX) (CD) (DAT)

SELECTOR

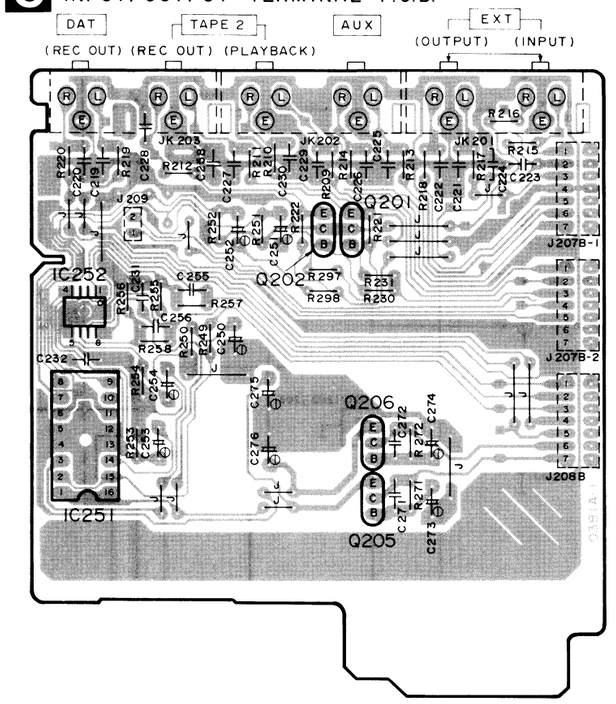
P.C.B.



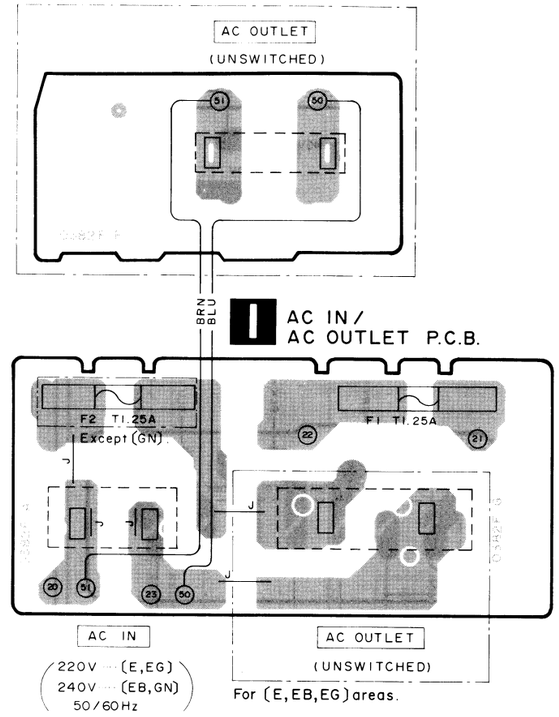
H POWER SWITCH/HEADPHONES P.C.B.



C INPUT/OUTPUT TERMINAL P.C.B.

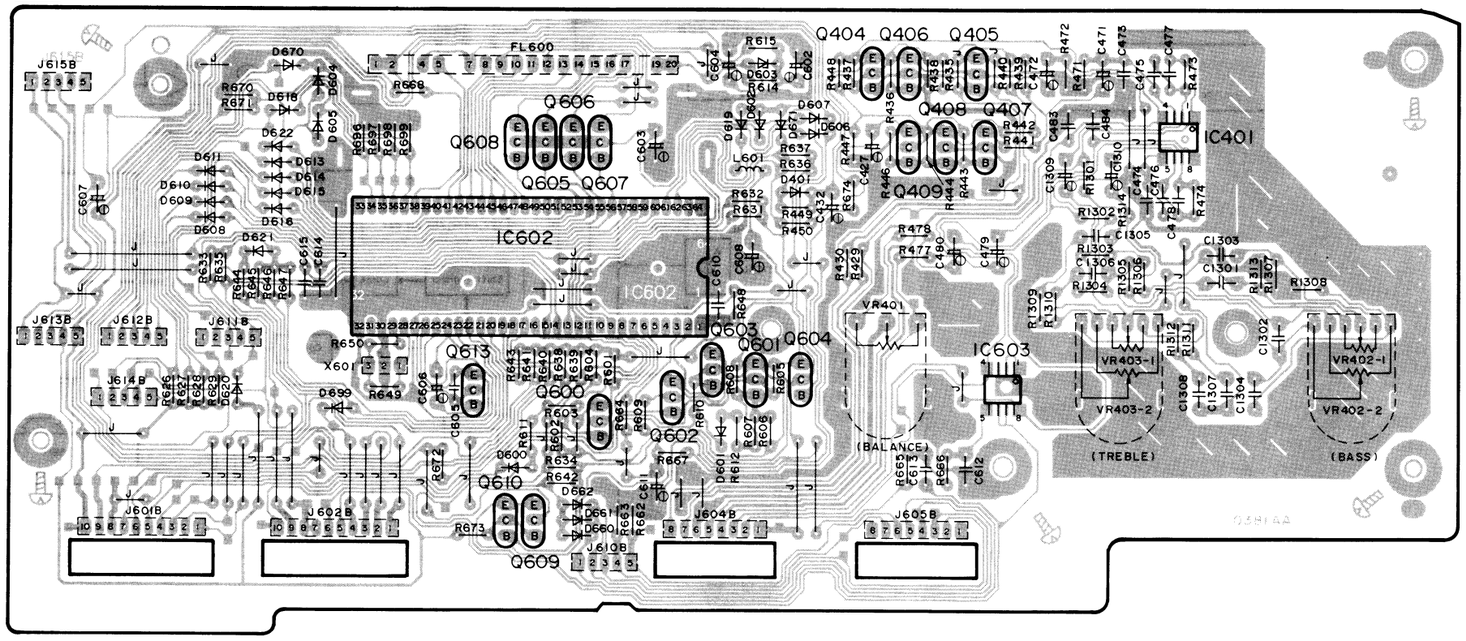


For (GN) area.



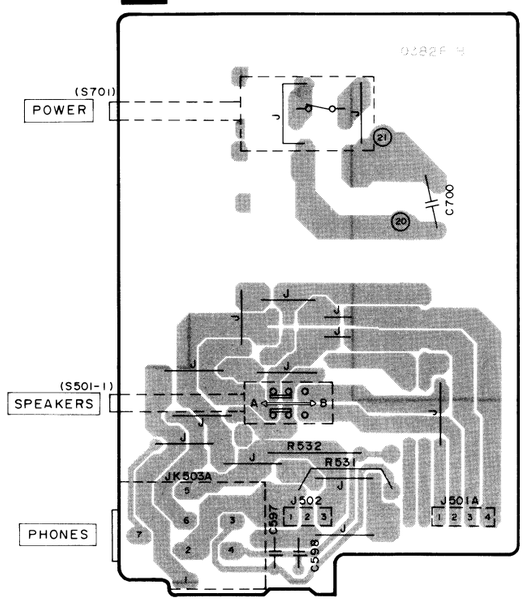
I AC IN/ AC OUTLET P.C.B.

E FL DRIVE P.C.B.

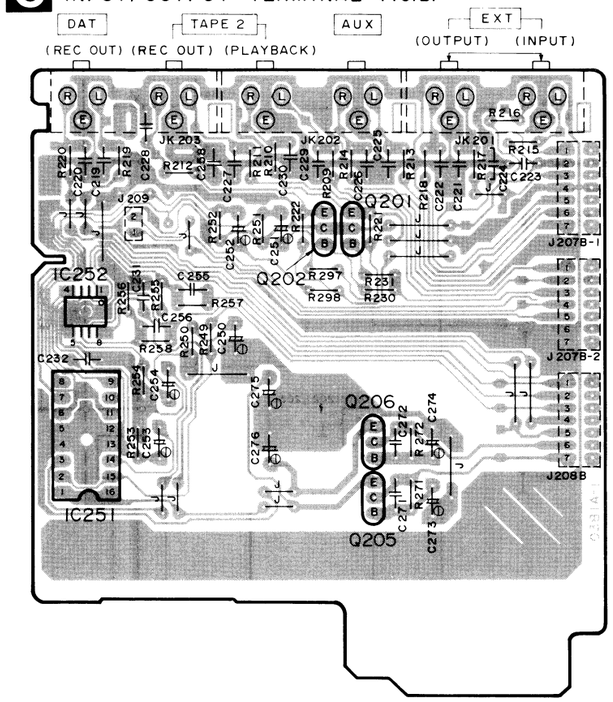


12 13 14 15 16 17 18 19 20 21 22

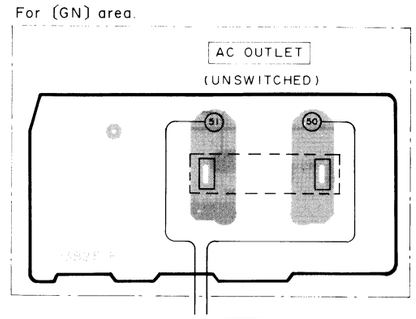
H POWER SWITCH/HEADPHONES P.C.B.



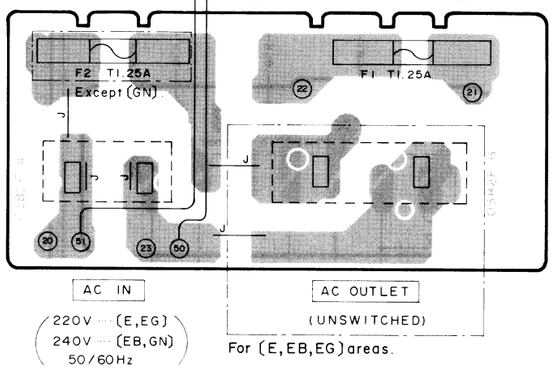
C INPUT/OUTPUT TERMINAL P.C.B.

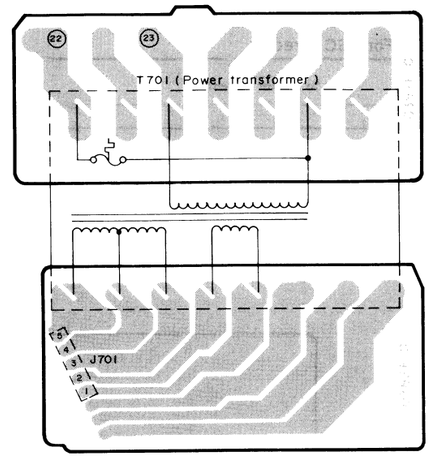


For (GN) area.

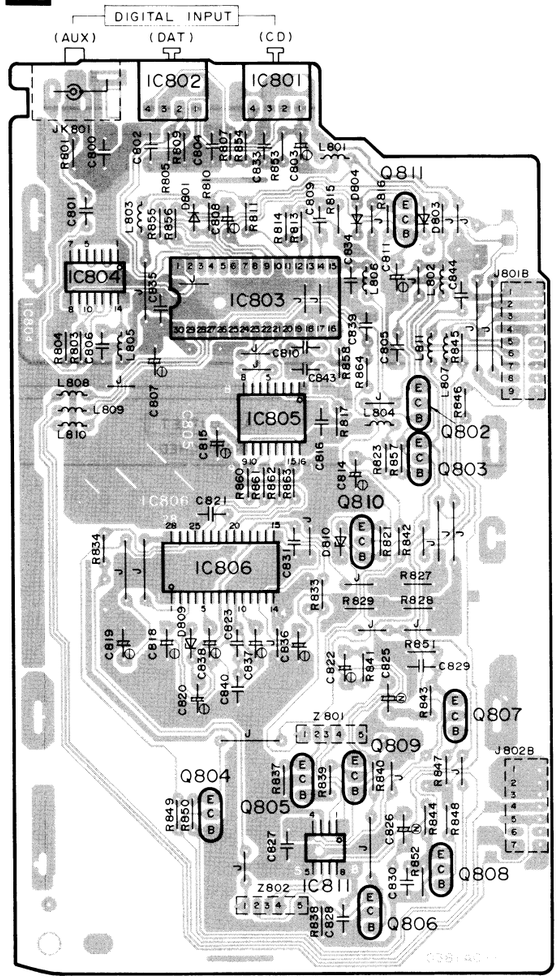


I AC IN/ AC OUTLET P.C.B.

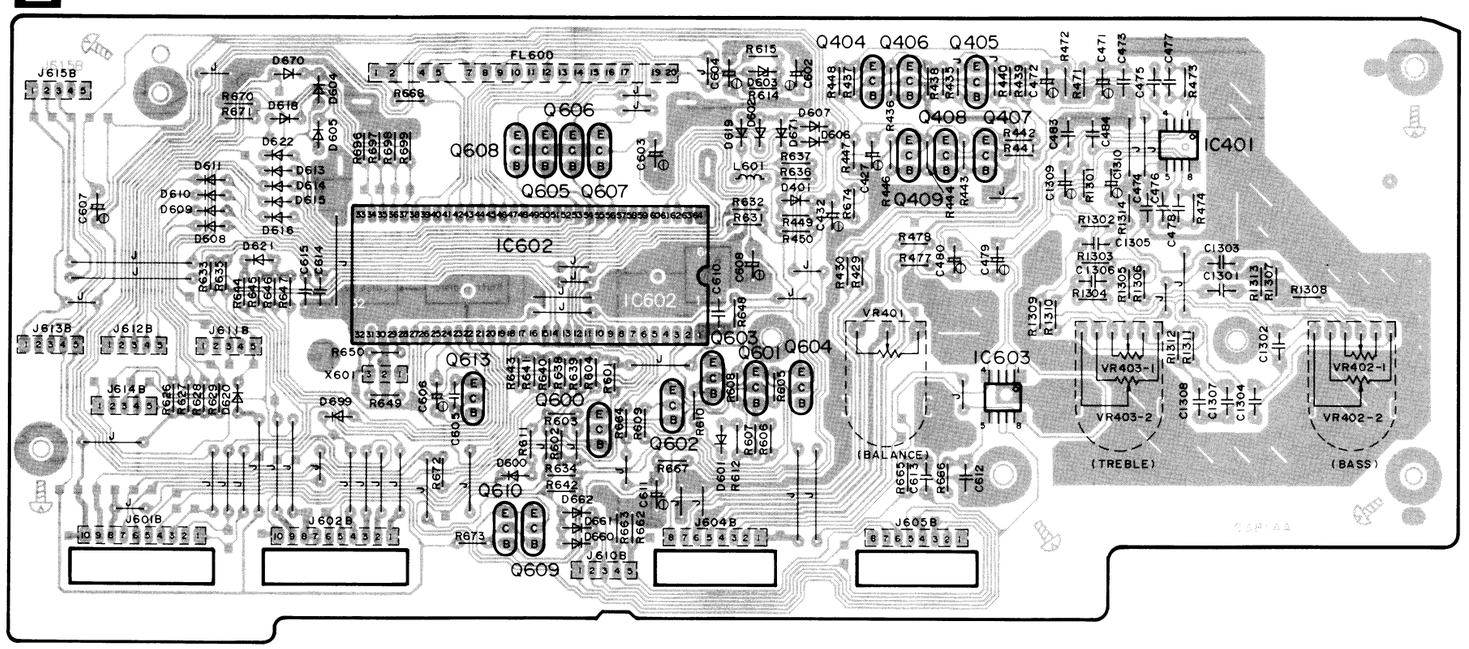


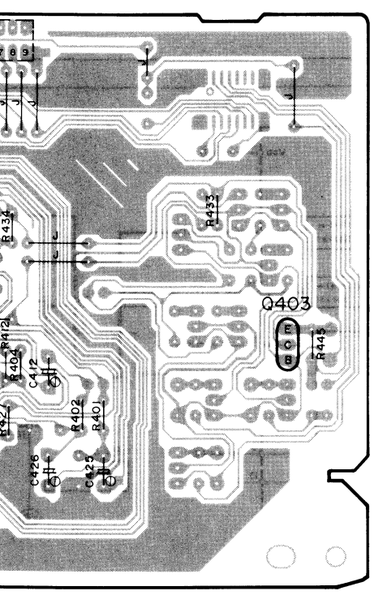


A D/A CONVERTER P.C.B.

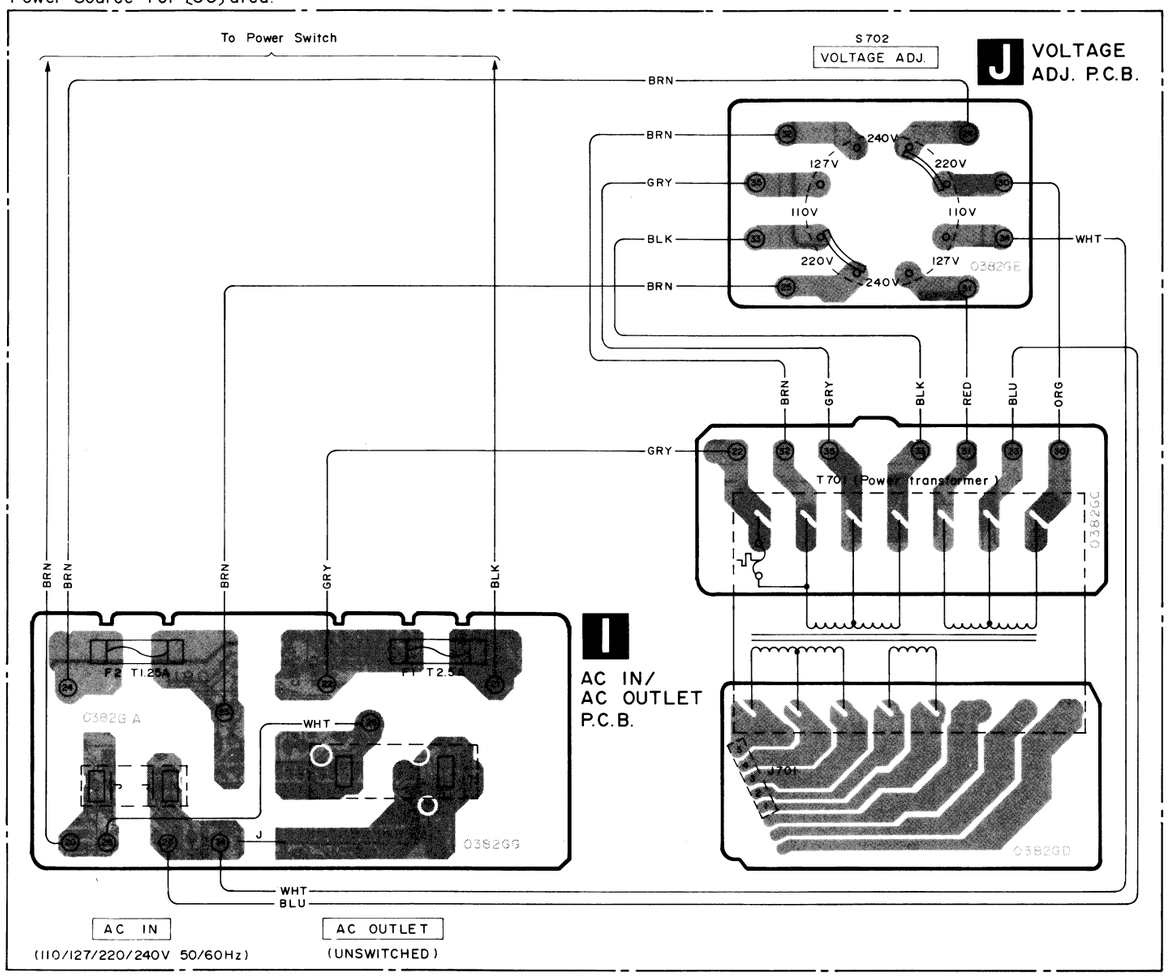


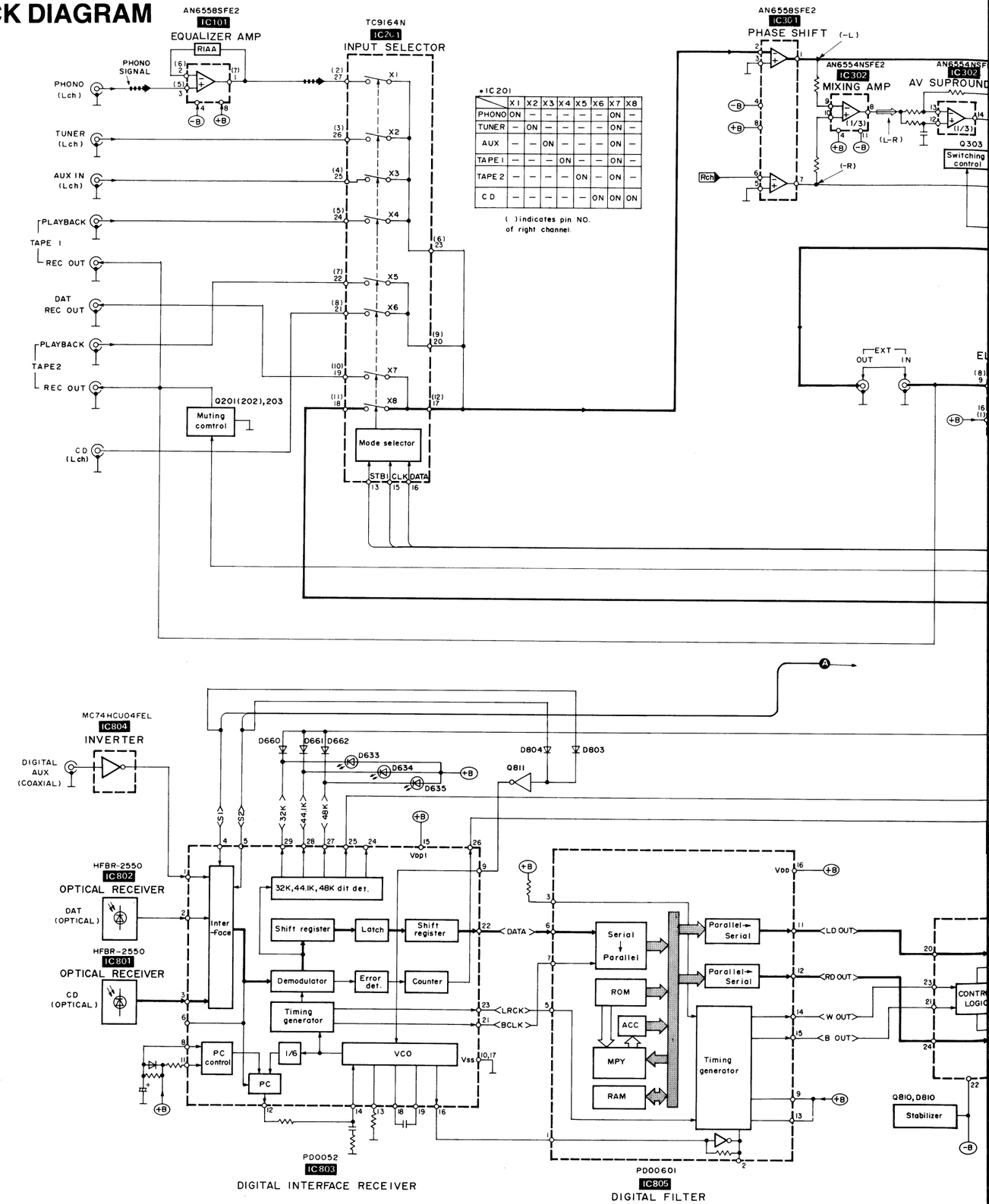
E FL DRIVE P.C.B.



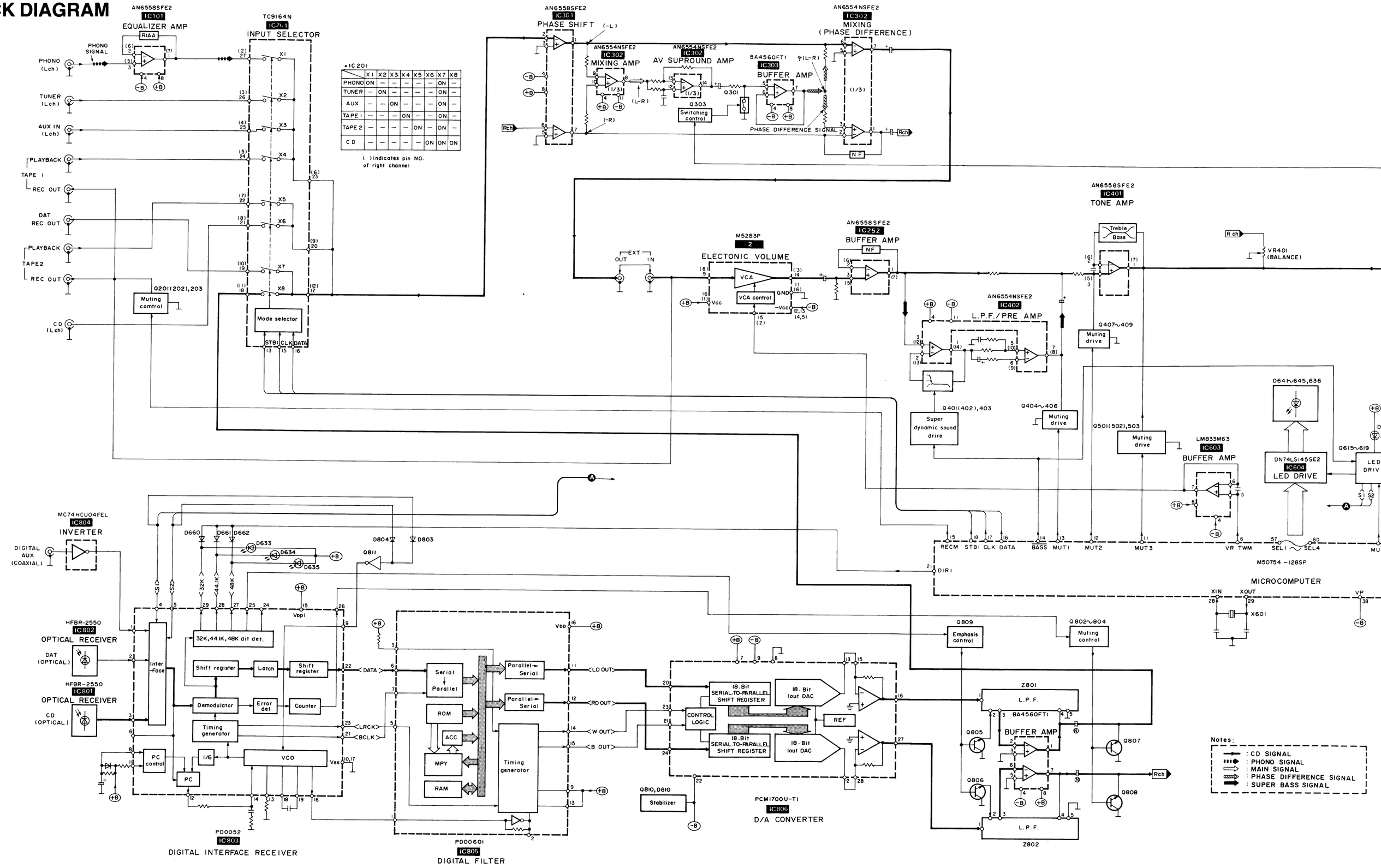


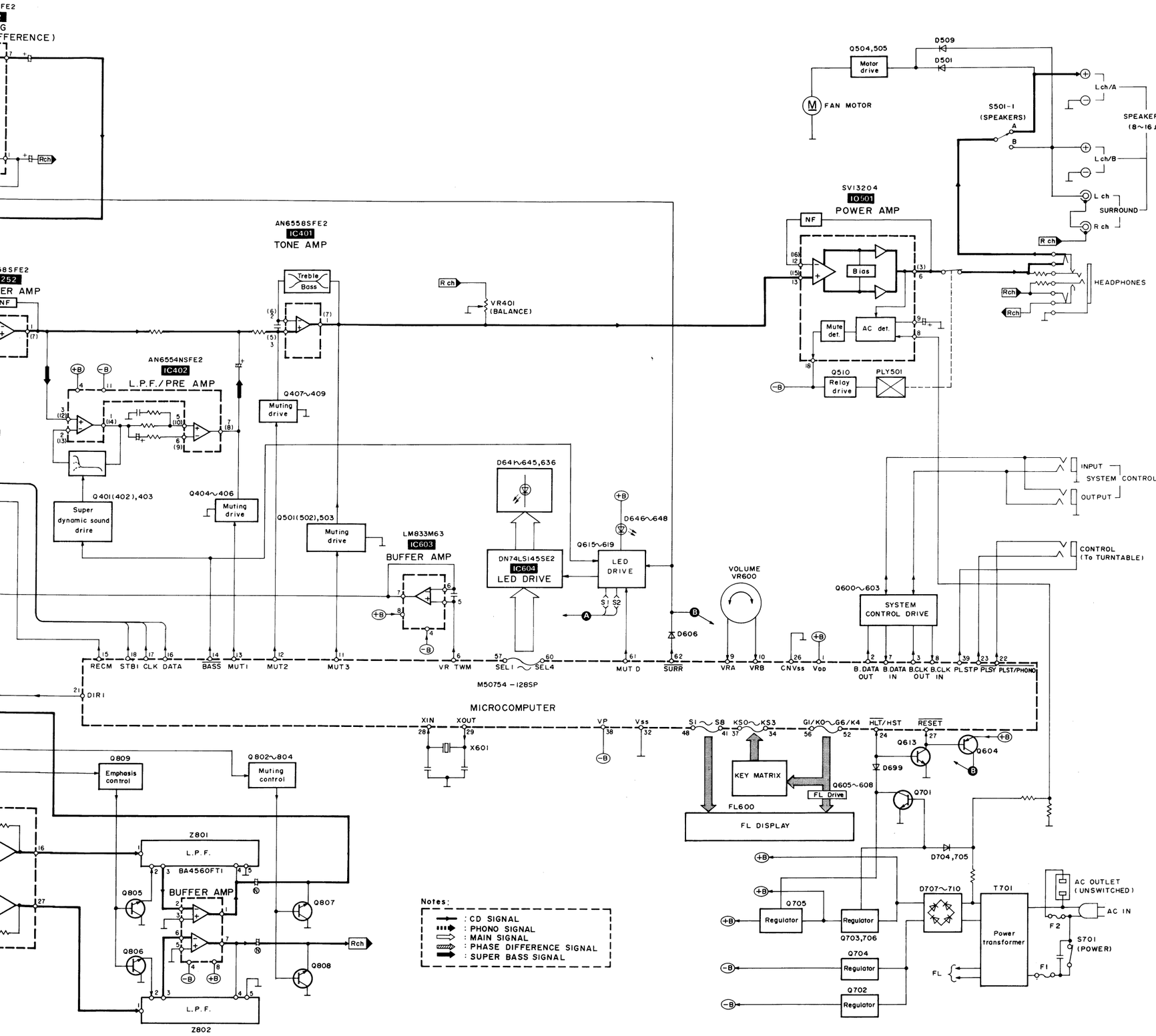
■ BLOCK DIAGRAM





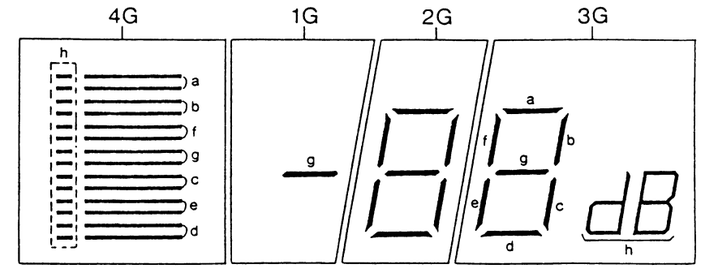
CK DIAGRAM


AN6558SFE2
IC101
EQUALIZER AMP
RIAA
PHONO SIGNAL
PHONO (Lch)
TUNER (Lch)
AUX IN (Lch)
PLAYBACK
TAPE 1
REC OUT
DAT REC OUT
PLAYBACK
TAPE2
REC OUT
CD (Lch)
TC9164N
IC201
INPUT SELECTOR
X1
X2
X3
X4
X5
X6
X7
X8
Mode selector
STBI CLK DATA
Muting comtrol
Q201(202),203
•IC201
PHONO ON – – – – – ON –
TUNER – ON – – – – ON –
AUX – – ON – – – ON –
TAPE 1 – – – ON – – ON –
TAPE 2 – – – – ON – ON –
CD – – – – – ON ON ON
( ) indicates pin NO. of right channel
AN6558SFE2
IC301
PHASE SHIFT (-L)
(-R)
Rch
AN6554NSFE2
IC302
MIXING AMP
AN6554NSFE2
IC302
AV SUPROUND AMP
(L-R)
Q303
Switching control
Q301
BA4560FTI
IC303
BUFFER AMP
9(L-R)
PHASE DIFFERENCE SIGNAL
AN6554NSFE2
IC302
MIXING
(PHASE DIFFERENCE)
(1/3)
NF
Rch
M5283P
2
EXT OUT IN
ELECTONIC VOLUME
VCA
VCA control
GND
Vcc
-Vcc
AN6558SFE2
IC252
BUFFER AMP
NF
AN6558SFE2
IC401
TONE AMP
Treble
Bass
R ch
VR401 (BALANCE)
AN6554NSFE2
IC402
L.P.F./PRE AMP
Q407~409
Muting drive
Q401(402),403
Super dynamic sound drire
Q404~406
Muting drive
Q501(502),503
Muting drive
LM833M63
IC603
BUFFER AMP
D641~645,636
D646
DN74LS145SE2
IC604
LED DRIVE
Q615~619
LED DRIVE
S1 S2
RECM STBI CLK DATA BASS MUT1 MUT2 MUT3 VR TWM SEL1 SEL4 MUT D
M50754-128SP
MICROCOMPUTER
DIR1
XIN XOUT VP Vs
X601
MC74HCU04FEL
IC804
INVERTER
DIGITAL AUX (COAXIAL)
D660 D661 D662 D633 D634 D635
D804 D803
Q811
HFBR-2550
IC802
OPTICAL RECEIVER
DAT (OPTICAL)
HFBR-2550
IC801
OPTICAL RECEIVER
CD (OPTICAL)
Inter -Face
32K,44.1K,48K dit det.
Shift register
Latch
Shift register
Demodulator
Error det.
Counter
Timing generator
PC control
1/6
VCO
PC
PD00052
IC803
DIGITAL INTERFACE RECEIVER
Serial Parallel
ROM
ACC
MPY
RAM
Timing generator
Parallel→Serial
Parallel→Serial
PD00601
IC805
DIGITAL FILTER
LD OUT
RD OUT
W OUT
B OUT
Q810, D810
Stabilizer
18.Bit SERIAL-TO-PARALLEL SHIFT REGISTER
18.Bit Iout DAC
CONTROL LOGIC
REF
PCM1700U-TI
IC806
D/A CONVERTER
Q809
Emphasis control
Q802~804
Muting control
Z801
L.P.F.
BA4560FTI
BUFFER AMP
Q805
Q806
Q807
Q808
Z802
Rch
Notes:
: CD SIGNAL
: PHONO SIGNAL
: MAIN SIGNAL
: PHASE DIFFERENCE SIGNAL
: SUPER BASS SIGNAL



■ DESCRIPTION OF FL PANEL
[FL600 (SADFV217)]

•GRID ASSIGNMENT



•PIN CONNECTION

Pin No.	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
Connection	F2	F2	NP	a	4G	b	c	d	1G	e	f	2G	g	3G	NP	h	3G	NP	F1	F1

■ FUNCTIONS OF IC TERMINALS

•IC805 (PD00601)

Pin No.	Symbol	I/O	Function Description
1	X IN	I	These are the I/O terminals for the oscillating clock signal.
2	X OUT	O	
3	MODE 1	I	Master clock input terminal.
5	LR CLK	I	LR clock input terminal.
6	DATA	I	Serial data input terminal.
7	BCK	I	Bit clock input terminal.
9 • 13	MODE 2 • MODE 3	I	Select the output data.
11	LD OUT	O	Output the signal on the left channel.
12	RD OUT	O	Output the signal on the right channel.
14	W OUT	O	Output the signal for the word clock.
15	B OUT	O	Output the signal for the bit clock.
16	VDD	I	To be connected to a power supply. (+5 V)

MODE 3	MODE 2	OUTPUT DATA
H	H	18 bit
	L	16 bit
L	—	20 bit

●IC602 (M50754–128SP)

Pin No.	Symbol	I/O	Function Description
1	VDD	—	To be connected to a power supply. (+5 V)
2	B. DATA OUT	O	This is the output terminal for the bus data signal.
3	B. CLK OUT	O	This is the output terminal for the bus clock signal.
6	VR PWM	O	This terminal outputs the signal for the control of the volume.
7	B. DATA IN	I	This is the input terminal for the bus data signal.
8	B. CLK IN	I	This is the input terminal for the bus clock signal.
9	VR A	I	These are the terminals for the rotary encoder of the volume of VR600.
10	VR B		
11	MUT 3	O	Outputs the −6 dB signal for control of attenuated muting.
12	MUT 2		
13	MUT 1	O	Output the signal for the control of muting.
14	$\overline{\text{BASS}}$	O	Output the signal for the control of super bass LED.
15	REC M	O	Output the signal for muting the VTR 1 recording.
16	DATA	O	These are output terminal for data and clock signals.
17	CLK		
18	STB 1	O	The serial data inputted into IC201 is latched by the STB pulse and the switch is set to ON according to data.
22	$\overline{\text{PLST/PHONO}}$	O	These are the terminals for sync recording on the player.
23	$\overline{\text{PLSY}}$	I	
24	$\overline{\text{HLT/HST}}$	I	This is the terminal for the detection of power supply.
25	KS4	I	This is the key scan terminal.
27	$\overline{\text{RESET}}$	I	This is the input terminal for the reset signal.
28	X IN	I	These are the I/O terminals for the oscillating clock signal.
29	X OUT	O	
34 ≀ 37	KS 3 ≀ KS 0	I	These are.the key scan terminals.
38	VP	I	The signal which pulls down the voltage is inputted into this terminal.
39	PLS TP	O	This is the terminal for sync recording on the player.
41 ≀ 48	S8 ≀ S1	O	There terminals output signals for the control of the FL display.
52 ≀ 56	G5/K4 ≀ G1/K0		
57 ≀ 60	SEL 1 ≀ SEL 4	O	Output the signal for the control of the LED.
61	MUT D		
62	$\overline{\text{SURR}}$		

■ REPLACEMENT PARTS LIST

Notes : * Important safety notice:
Components identified by ⚠ mark have special characteristics important for safety. When replacing any of these components use only manufacturer's specified parts.
* The parenthesized indications in the Remarks columns specify the areas. (Refer to the cover page for area.)
Parts without these indications can be used for all areas.

Ref. No.	Part No.	Part Name & Description	Remarks
		INTEGRATED CIRCUIT(S)	
IC101	AN6558SFE2	IC, PHONO EQ AMP.	
IC201	TC9164N	IC, INPUT SELECTOR	
IC251	M5283P	IC, ATTENUATOR	
IC252	AN6558SFE2	IC, BUFFER AMP.	
IC301	AN6558SFE2	IC, PHASE SHIFT	
IC302	AN6554NSFE2	IC, MIXING/PHASE SHIFT	
IC303	BA4560FT1	IC, BUFFER AMP.	
IC401	AN6558SFE2	IC, TONE AMP.	
IC402	AN6554NSFE2	IC, PRE/BUFFER AMP.	
IC501	SV13204	IC, POWER AMP.	
IC602	M50754-128SP	IC, MICROCOMPUTER	
IC603	LM833M63	IC, BUFFER AMP.	
IC604	DN74LS145SE2	IC, LED DRIVE	
IC801, 802	HFBR-2550	IC, OPTICAL RECEIVER	
IC803	PD0052	IC, DIGITAL INTERFACE	
IC804	MC74HCU04FEL	IC, INVERTER	
IC805	PD00601	IC, DIGITAL FILTER	
IC806	PCM1700U-T1	IC, D/A CONVERTER	
IC811	BA4560FT1	IC, BUFFER AMP.	
		TRANSISTOR(S)	
Q201, 202	2SD2144STA	TRANSISTOR	
Q203	DTA114ESTP	TRANSISTOR	
Q205	2SC3311AQSTA	TRANSISTOR	
Q206	2SA1309AQSTA	TRANSISTOR	
Q301	2SD2144STA	TRANSISTOR	
Q303	DTA114ESTP	TRANSISTOR	
Q401, 402	2SD2144STA	TRANSISTOR	
Q403, 404	DTA114ESTP	TRANSISTOR	
Q405-408	2SD2144STA	TRANSISTOR	
Q409	2SA1309AQSTA	TRANSISTOR	
Q501, 502	2SD1450RSTTA	TRANSISTOR	
Q503	2SA1309AQSTA	TRANSISTOR	
Q504	2SC2458ABCTA	TRANSISTOR	
Q505	2SA1309AQSTA	TRANSISTOR	
Q510	2SA992EFPTA	TRANSISTOR	
Q600, 601	2SC3311AQSTA	TRANSISTOR	
Q602, 603	DTC144ESTP	TRANSISTOR	
Q604	UN4115TA	TRANSISTOR	
Q605-608	DTC114ESTP	TRANSISTOR	
Q609, 610	2SC3311AQSTA	TRANSISTOR	
Q613	DTC114ESTP	TRANSISTOR	
Q615	DTC114ESTP	TRANSISTOR	

Ref. No.	Part No.	Part Name & Description	Remarks
Q616, 617	UN4215TA	TRANSISTOR	
Q618, 619	DTA114ESTP	TRANSISTOR	
Q701	UN4215TA	TRANSISTOR	
Q702	2SB621AQRSTA	TRANSISTOR	
Q703	2SD1761DEF	TRANSISTOR	
Q704	2SB1187DEF	TRANSISTOR	
Q705, 706	2SD1761DEF	TRANSISTOR	
Q802, 803	DTC114ESTP	TRANSISTOR	
Q804	DTA114ESTP	TRANSISTOR	
Q805, 806	2SC3114STUTA	TRANSISTOR	
Q807, 808	2SD2144STA	TRANSISTOR	
Q809	DTA114ESTP	TRANSISTOR	
Q810	2SC3311AQSTA	TRANSISTOR	
Q811	DTC114ESTP	TRANSISTOR	
		DIODE(S)	
D401	MA165TA	DIODE	
D501, 502	MA167TA	DIODE	
D503	MA165TA	DIODE	
D504	MA4051MTA	DIODE	
D507, 508	MA4120MTA	DIODE	
D509, 510	MA167TA	DIODE	
D515	MA4160MTA	DIODE	
D600, 601	MA700ATA	DIODE	
D602	MA165TA	DIODE	
D603	MA4047MTA	DIODE	
D604-611	MA165TA	DIODE	
D613-616	MA165TA	DIODE	
D618	MA165TA	DIODE	
D619	1SS291TA	DIODE	
D620, 621	MA165TA	DIODE	
D622	MA700ATA	DIODE	
D627-630	MA165TA	DIODE	
D633-635	LN846RP-C	LED	
D636	LN038494PS	LED	
D641-645	LN820RP-C	LED	
D646-648	LN846RP-C	LED	
D660-662	MA165TA	DIODE	
D670, 671	MA165TA	DIODE	
D699	MA165TA	DIODE	
D701, 702	MA4150MTA	DIODE	
D703-705	MA165TA	DIODE	
D706	MA4062HTA	DIODE	
D707-710	RVDP300DLF	DIODE	⚠
D713	MA4300MTA	DIODE	
D801	MA165TA	DIODE	

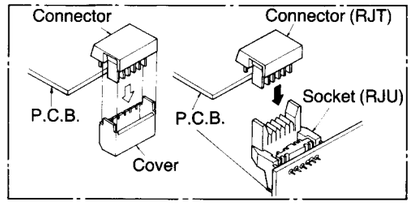
Ref. No.	Part No.	Part Name & Description	Remarks
D803, 804	MA165TA	DIODE	
D809	MA4051LTA	DIODE	
D810	MA4043MTA	DIODE	
		VARIABLE RESISTOR(S)	
VR401	EWHFDAF25G15	BALANCE CONTROL	
VR402, 403	EWC2XAF25C15	BASS/TREBLE CONTROL	
VR600	EVQWWVF2024B	MAIN VOLUME	
		COMPONENT COMBINATION(S)	
Z801, 802	H8DN2041B	COMPONENT COMBINATION	
		COIL(S)	
L501, 502	SLQY07G-40	COIL	
L563-566	SLQY07G-40	COIL	(EG)
L601	RLQZP100KT-Y	COIL	
L602, 603	RLQZP101KT-Y	COIL	
L604	RLQZP101KT-Y	COIL	
L801	RLQZP470KT-Y	COIL	
L802	RLQZP101KT-Y	COIL	
L803	RLQZP3R3KT-Y	COIL	
L804	RLQZP1R2KT-Y	COIL	
L805	RLQZP3R3KT-Y	COIL	
L806	RLQZP1R2KT-Y	COIL	
L807	RLQZP3R3KT-Y	COIL	
L808-810	RLQZP1R2KT-Y	COIL	
L811	RLQZP3R3KT-Y	COIL	
		OSCILLATOR(S)	
X601	EFOGC6004T4	OSCILLATOR	
		DISPLAY TUBE	
FL600	SADFV217	DISPLAY TUBE	
		FUSE(S)	
F1	XBA2C12TBO	FUSE 250V T1.25A	⚠(E, EB, EG)
F1	XBA2C25TBO	FUSE 250V T2.5A	⚠(GC)
F2	XBA2C12TBO	FUSE 250V T1.25A	⚠
		SWITCH(ES)	
S501-1	RSP2B009-J	SW, SPEAKER SELECTOR A/B	
S600	EVQ21405R	SW, SURROUND SOUND	
S601	EVQ21405R	SW, SUPER BASS	
S602	EVQ21405R	SW, AUDIO MUTING	
S603	EVQ21405R	SW, VOLUME PRESET	

Ref. No.	Part No.	Part Name & Description	Remarks
S604	EVQ21405R	SW, INPUT SELECTOR(DAT)	
S605	EVQ21405R	SW, INPUT SELECTOR(CD)	
S606	EVQ21405R	SW, INPUT SELECTOR(D. AUX)	
S607	EVQ21405R	SW, INPUT SELECTOR(TAPE1)	
S608	EVQ21405R	SW, INPUT SELECTOR(TAPE2)	
S609	EVQ21405R	SW, INPUT SELECTOR(AUX)	
S610	EVQ21405R	SW, INPUT SELECTOR(TUNER)	
S611	EVQ21405R	SW, INPUT SELECTOR(PHONO)	
S701	ESB8249V	SW, POWER	⚠
S702	ESE37263	SW, VOLTAGE SELECTOR	⚠(GC)
		JACK(S)	
J209	SJT3213	CONNECTOR(2P)	
J502	RJS1A1703	CONNECTOR(3P)	
J701	RJS1A1705	CONNECTOR(5P)	
J201A	RJT057W007	CONNECTOR(7P)	
J202A	RJT057W007	CONNECTOR(7P)	
J203A	RJT057W009	CONNECTOR(9P)	
J205A	RJT057W009	CONNECTOR(9P)	
J208A	RJT057W007	CONNECTOR(7P)	
J501A	RJS1A1704	CONNECTOR(4P)	
J601A	RJU003K010M1	SOCKET(10P)	(Black)
	SJT31054WF	CONNECTOR(10P)	(Ivory)
J602A	RJU003K010M1	SOCKET(10P)	(Black)
	SJT31054WF	CONNECTOR(10P)	(Ivory)
J604A	RJU003K008M1	SOCKET(8P)	(Black)
	SJT30854WF	CONNECTOR(8P)	(Ivory)
J605A	RJU003K008M1	SOCKET(8P)	(Black)
	SJT30854WF	CONNECTOR(8P)	(Ivory)
J610A	SJS50581BB	SOCKET(5P)	
J611A	SJS50581BB	SOCKET(5P)	
J612A	SJS50581BB	SOCKET(5P)	
J613A	SJS50581BB	SOCKET(5P)	
J614A	SJS50581BB	SOCKET(5P)	
J615A	SJS50581BB	SOCKET(5P)	
J801A	RJT057W009	CONNECTOR(9P)	
J802A	RJT057W007	CONNECTOR(7P)	
J207A-1, 2	RJT057W007	CONNECTOR(7P)	
J201B	RJU057W007	SOCKET(7P)	
J202B	RJU057W007	SOCKET(7P)	
J203B	RJU057W009	SOCKET(9P)	
J205B	RJU057W009	SOCKET(9P)	
J208B	RJU057W007	SOCKET(7P)	
J601B	RJT003K010M1	CONNECTOR(10P)	(Black or Gray)
	SJS51087WF	SOCKET(10P)	(Ivory)
J602B	RJT003K010M1	CONNECTOR(10P)	(Black or Gray)
	SJS51087WF	SOCKET(10P)	(Ivory)
J604B	RJT003K008M1	CONNECTOR(8P)	(Black or Gray)
	SJS50887WF	SOCKET(8P)	(Ivory)
J605B	RJT003K008M1	CONNECTOR(8P)	(Black or Gray)
	SJS50887WF	SOCKET(8P)	(Ivory)

Ref. No.	Part No.	Part Name & Description	Remarks
J610B	SJT30549BB1	CONNECTOR(5P)	
J611B	SJT30549BB1	CONNECTOR(5P)	
J612B	SJT30549BB1	CONNECTOR(5P)	
J613B	SJT30549BB1	CONNECTOR(5P)	
J614B	SJT30549BB1	CONNECTOR(5P)	
J615B	SJT30549BB1	CONNECTOR(5P)	
J801B	RJU057W009	SOCKET(9P)	
J802B	RJU057W007	SOCKET(7P)	
J207B-1, 2	RJU057W007	SOCKET(7P)	
JK201	SJF3069N	EXT IN/OUT	
JK202	SJF3069N	TAPE2 PB/AUX	
JK203	SJF3069N	DAT/TAPE2 REC OUT	
JK204	SJF3067N	PHONO/TAPE1 REC OUT	
JK205	SJF3069N	TAPE1 PB/TUNER	
JK206	SJF3068N	CD	
JK501	RJR0054	SP A	
JK502	SJF3068-4N	SP SURROUND	
JK503	RJR0054	SP B	
JK503A	RJJ67TS02	H.P JACK	
JK601	RJJ33T01	SYSTEM CONTROL IN	
JK602	RJJ33T01	SYSTEM CONTROL OUT	
JK603	RJJ33T01	TURN TABLE CONTROL	
JK801	SJFD7-2	DIGITAL INPUT	

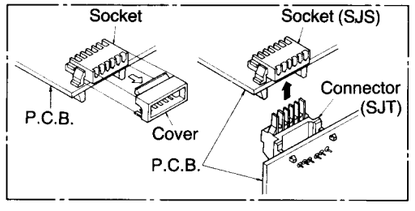
Ref. No.	Part No.	Part Name & Description	Remarks
		FUSE HOLDER(S)	
FC1, 2	SJT388	FUSE HOLDER	⚠
FC3, 4	SJT388	FUSE HOLDER	⚠(E, EB, EG, GC)
		RELAY	
RLY501	SSY134	RELAY	
		TRANSFORMER	
T701	SLT5N482-W	POWER TRANSFORMER	⚠(E, EG)
T701	SLT5N481-W	POWER TRANSFORMER	⚠(EB, GN)
T701	SLT5N483-W	POWER TRANSFORMER	⚠(GC)

Ⓐ



Pins	Part No.	
8 pin	RJT003K008M1	(Black or Gray)
8 pin	RJU003K008M1	(Black)
10 pin	RJT003K010M1	(Black or Gray)
10 pin	RJU003K010M1	(Black)

Ⓑ

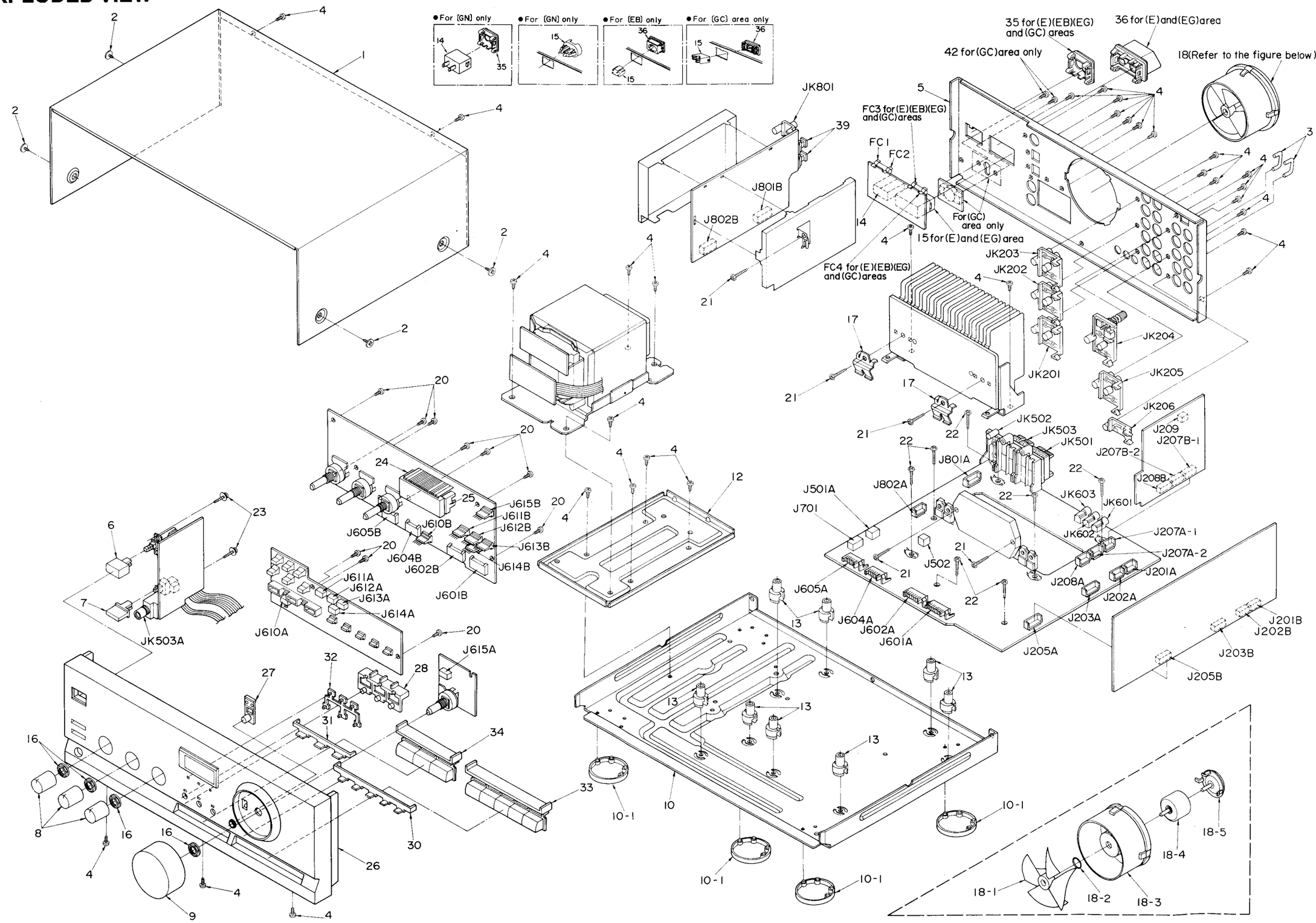


Pins	Part No.	
8 pin	SJS50887WF	(Ivory)
8 pin	SJT30854WF	(Ivory)
10 pin	SJS51087WF	(Ivory)
10 pin	SJT31054WF	(Ivory)

Notes:

- Regarding Ref. No. J601A, J602A, J604A, J605A, J601B, J602B, J604B, J605B, there are two types (Ⓐ and Ⓑ).
- Be sure to order the replacement parts of the desired color by the corresponding part numbers.
- The type-Ⓐ connector and the type-Ⓑ socket are protected with covers when they are supplied. Remove the cover after soldering the connector or socket to P.C.B.

■ EXPLODED VIEW



Ref. No.	Part No.	Part Name & Description	Remarks
		CABINET PARTS	
1	RKM0024A-2K	CABINET	
2	RHD30007	SCREW	
3	SJP9205-2Y	SHORTING PIN	
4	XTBS3+8JFZ1	SCREW	
5	RGR0083B-D	REAR PANEL	(E)
5	RGR0083A-B	REAR PANEL	(EB)
5	RGR0083B-E	REAR PANEL	(EG)
5	RGR0083D	REAR PANEL	(GC)
5	RGR0083C	REAR PANEL	(GN)
6	RGU0030	POWER BUTTON	
7	RGU0101	SP SELECT BUTTON	
8	RGW0028-1K	TONE KNOB	
9	RGW0049	MAIN VOL KNOB	
10	RFKJUX301E-K	CHASSIS ASS'Y	
10-1	RKA0011	FOOT	
12	RMA0138	ANGLE	
13	SHE187-2	HOLDER	
14	SJS9231-1B	AC INLET	⚠(E, EB, EG, GC)
14	SJS9234B	AC INLET	⚠(GN)
15	SJS9333B	AC OUTLET	⚠(E, EG)
15	SJS9332B	AC OUTLET	⚠(EB)
15	SJS9233B	AC OUTLET	⚠(GC)
15	RJS1A4602	AC OUTLET	⚠(GN)
16	SNE4021-1	NUT	
17	SUS894-1	SPRING	
18	SYE1128-3	FAN ASS'Y	
18-1	SHE232	FAN	
18-2	SUS271	SPRING	
18-3	SHE233	FAN CASE	
18-4	MDN-4RB4MRC	MOTOR	
18-5	SHE234	CAP	
20	XTBS26+8J	SCREW	
21	XTB3+16J	SCREW	
22	XTB3+20JFZ	SCREW	
23	XTWS3+8T	SCREW	
24	SMN2056	FL HOLDER(L)	
25	SMN2056-1	FL HOLDER(R)	
26	RFKGUX501E-K	FRONT PANEL	
27	RFKNUX901EK1	VOL PRESET BUTTON	
28	RFKNUX901EK2	SURROUND(etc) BUTTON	
30	RGL0080-X	PANEL LIGHT	
31	RGL0081-X	PANEL LIGHT	
32	RGL0082-X	PANEL LIGHT	
33	RGU0361-K	INPUT SELECTOR BUTTON	
34	RGU0362-K	DIGITAL SELECTOR BUTTON	
35	SJS9231A	AC INLET COVER	⚠(E, EB, EG, GC)
35	SJS9234A	AC INLET COVER	⚠(GN)
36	SJS9333A	AC OUTLET COVER	⚠(E, EG)
36	SJS9332A	AC OUTLET COVER	⚠(EB)

Ref. No.	Part No.	Part Name & Description	Remarks
36	SJS9233A	AC OUTLET COVER	⚠(GC)
39	RFKNUX901EKA	CAP	
42	XYN3+C6FZ	SCREW	(GC)
		PACKING MATELIAL	
P1	RPG0468	CARTON BOX	
P2	RPN0332	PAD	
P3	SPSD152	ACCESSORIES BOX	
P4	XZB52X60A01Z	PROTECTION COVER	
		ACCESSORIES	
A1	RQF0569	INSTRUCTIONS MANUAL ASS'Y	(E)
A1	RQF0568	INSTRUCTIONS MANUAL ASS'Y	(EB)
A1	RQF0570	INSTRUCTIONS MANUAL ASS'Y	(EG)
A1	RQF0571	INSTRUCTIONS MANUAL ASS'Y	(GC)
A1	RQF0572	INSTRUCTIONS MANUAL ASS'Y	(GN)
A1-1	RQA0013	WARRANTY CARD	(E, EB, EG)
A1-1	SQX7186	WARRANTY CARD	(GN)
A1-2	RQCB0169	SERVICENTOR LIST	
A1-3	RFKSUX501E-K	INSTRUCTIONS MANUAL	(E)
A1-3	RQT0463-B	INSTRUCTIONS MANUAL	(EB, GN)
A1-3	RQT0466-D	INSTRUCTIONS MANUAL	(EG)
A1-3	RQT0464-G	INSTRUCTIONS MANUAL	(GC)
A1-4	RQCS0009	CAUTION NOTE FOR FTZ	(EG)
A2	SFDAC05E03	AC CORD	⚠(E, EG)
A2	SJA188	AC CORD	⚠(EB)
A2	RJA0004	AC CORD	⚠(GC)
A2	SJA173	AC CORD	⚠(GN)
A3	SJP9215	AC PLUG ADAPTOR	⚠(GC)

Notes : * Capacity valuse are in microfarads (uF) unless specified otherwise, P=Pico-farads(pF) F=Farads(F)
* Resistance values are in ohms, unless specified otherwise, 1K=1,000(OHM) , 1M=1,000k(OHM)

Ref. No.	Part No.	Values & Remarks
		RESISTORS
R107, 108	ERDS2TJ471T	1/4W 470
R109, 110	ERDS2TJ473T	1/4W 47K
R111, 112	ERDS2TJ331T	1/4W 330
R113, 114	ERDS2TJ680T	1/4W 68
R115, 116	ERDS2TJ184T	1/4W 180K
R117, 118	ERDS2TJ123T	1/4W 12K
R119, 120	ERDS2TJ224T	1/4W 220K
R121, 122	ERDS2TJ102T	1/4W 1K
R123, 124	ERDS2TJ471T	1/4W 470
R201, 202	ERDS2TJ472T	1/4W 4.7K
R203-206	ERDS2TJ102T	1/4W 1K
R207, 208	ERDS2TJ822T	1/4W 8.2K
R209, 210	ERDS2TJ102T	1/4W 1K
R211, 212	ERDS2TJ821T	1/4W 820
R213-220	ERDS2TJ102T	1/4W 1K
R221, 222	ERDS2TJ392T	1/4W 3.9K
R223, 224	ERDS2TJ334T	1/4W 330K
R225	ERDS2TJ273T	1/4W 27K
R230, 231	ERDS2TJ102T	1/4W 1K
R249	ERDS2TJ103T	1/4W 10K
R250	ERDS2TJ223T	1/4W 22K
R251, 252	ERDS2TJ473T	1/4W 47K
R253, 254	ERDS2TJ183T	1/4W 18K
R255, 256	ERDS2TJ153T	1/4W 15K
R257, 258	ERDS2TJ473T	1/4W 47K
R271, 272	ERDS2TJ152T	1/4W 1.5K
R297, 298	ERDS2TJ182T	1/4W 1.8K
R301-304	ERDS2TJ223T	1/4W 22K
R305, 306	ERDS2TJ224T	1/4W 220K
R307, 308	ERDS2TJ332T	1/4W 3.3K
R309, 310	ERDS2TJ223T	1/4W 22K
R311, 312	ERDS2TJ393T	1/4W 39K
R313-315	ERDS2TJ223T	1/4W 22K
R316	ERDS2TJ622T	1/4W 6.2K
R317	ERDS2TJ562T	1/4W 5.6K
R318	ERDS2TJ123T	1/4W 12K
R319	ERDS2TJ224T	1/4W 220K
R321, 322	ERDS2TJ332T	1/4W 3.3K
R324	ERDS2TJ332T	1/4W 3.3K
R325, 326	ERDS2TJ392T	1/4W 3.9K
R327, 328	ERDS2TJ104T	1/4W 100K
R329	ERDS2TJ332T	1/4W 3.3K
R331	ERDS2TJ105T	1/4W 1M
R332	ERDS2TJ334T	1/4W 330K
R401, 402	ERDS2TJ153T	1/4W 15K
R403, 404	ERDS2TJ103T	1/4W 10K
R405, 406	ERDS2TJ393T	1/4W 39K
R407, 408	ERDS2TJ333T	1/4W 33K
R409, 410	ERDS2TJ103T	1/4W 10K
R411, 412	ERDS2TJ332T	1/4W 3.3K
R413, 414	ERDS2TJ153T	1/4W 15K
R415, 416	ERDS2TJ222T	1/4W 2.2K
R417, 418	ERDS2TJ221T	1/4W 220
R419, 420	ERDS2TJ273T	1/4W 27K
R421, 422	ERDS2TJ470T	1/4W 47
R423, 424	ERDS2TJ153T	1/4W 15K
R425-428	ERDS2TJ152T	1/4W 1.5K
R429, 430	ERDS2TJ333T	1/4W 33K
R431, 432	ERDS2TJ102T	1/4W 1K
R433	ERDS2TJ105T	1/4W 1M
R434	ERDS2TJ334T	1/4W 330K
R435, 436	ERDS2TJ102T	1/4W 1K
R437	ERDS2TJ105T	1/4W 1M
R438	ERDS2TJ334T	1/4W 330K
R439, 440	ERDS2TJ152T	1/4W 1.5K
R441, 442	ERDS2TJ222T	1/4W 2.2K
R443, 444	ERDS2TJ102T	1/4W 1K
R445	ERDS2TJ222T	1/4W 2.2K
R446	ERDS2TJ104T	1/4W 100K
R447	ERDS2TJ334T	1/4W 330K
R448	ERDS2TJ105T	1/4W 1M
R449	ERDS2TJ103T	1/4W 10K
R450	ERDS2TJ332T	1/4W 3.3K
R471-474	ERDS2TJ334T	1/4W 330K
R477, 478	ERDS2TJ102T	1/4W 1K
R501	ERDS2TJ104T	1/4W 100K
R502	ERDS2TJ105T	1/4W 1M
R507, 508	ERDS2TJ222T	1/4W 2.2K
R509, 510	ERDS2TJ563T	1/4W 56K
R511, 512	ERDS2TJ182T	1/4W 1.8K
R513, 514	ERDS2TJ563T	1/4W 56K
R515, 516	ERDS2TJ223T	1/4W 22K
R517	ERDS2TJ563T	1/4W 56K
R518	ERDS2TJ684T	1/4W 680K
R519	ERDS2TJ154T	1/4W 150K
R520	ERDS2TJ153T	1/4W 15K
R521	ERDS2TJ103T	1/4W 10K
R522	ERDS1FVJ680T	1/2W 68 ⚠
R524	ERDS2TJ105T	1/4W 1M
R525, 526	ERD25FVJ100T	1/4W 10 ⚠
R527, 528	ERDS1FVJ100T	1/2W 10 ⚠
R529	ERG1SJ391E	1W 390
R530	ERDS2TJ223T	1/4W 22K
R531, 532	ERG1ANJP331S	1W 330
R533, 534	ERDS2TJ222T	1/4W 2.2K
R535-538	ERDS2TJ472T	1/4W 4.7K
R539	ERDS2TJ102T	1/4W 1K
R540	ERDS2TJ334T	1/4W 330K
R541	ERDS2TJ223T	1/4W 22K
R542	ERDS2TJ332T	1/4W 3.3K
R543	ERDS1FVJ560T	1/2W 56 ⚠
R545, 546	ERDS2TJ223T	1/4W 22K
R551	ERDS2TJ104T	1/4W 100K
R552	ERG1SJ391E	1W 390
R554	ERD25FVJ470T	1/4W 47 ⚠
R600	ERDS2TJ331T	1/4W 330
R601	ERDS2TJ223T	1/4W 22K
R602-604	ERDS2TJ393T	1/4W 39K
R605	ERDS2TJ223T	1/4W 22K
R606-608	ERDS2TJ393T	1/4W 39K
R609-612	ERDS2TJ100T	1/4W 10
R614, 615	ERDS2TJ151T	1/4W 150
R626-629	ERDS2TJ182T	1/4W 1.8K
R631, 632	ERDS2TJ103T	1/4W 10K
R633	ERDS2TJ332T	1/4W 3.3K
R634-637	ERDS2TJ103T	1/4W 10K
R638, 639	ERDS2TJ332T	1/4W 3.3K
R640	ERDS2TJ102T	1/4W 1K
R641-643	ERDS2TJ103T	1/4W 10K
R644	ERDS2TJ822T	1/4W 8.2K
R645	ERDS2TJ393T	1/4W 39K
R646	ERDS2TJ332T	1/4W 3.3K
R647	ERDS2TJ103T	1/4W 10K
R648	ERDS2TJ104T	1/4W 100K
R649	ERDS2TJ105T	1/4W 1M
R650	ERDS2TJ102T	1/4W 1K
R651	ERDS2TJ151T	1/4W 150
R652	ERDS2TJ331T	1/4W 330
R662, 663	ERDS2TJ103T	1/4W 10K
R664	ERDS2TJ223T	1/4W 22K
R665, 666	ERDS2TJ103T	1/4W 10K
R667	ERDS2TJ105T	1/4W 1M
R668	ERDS2TJ101T	1/4W 100
R670	ERDS2TJ104T	1/4W 100K
R671	ERDS2TJ102T	1/4W 1K
R672	ERDS2TJ101T	1/4W 100
R673	ERDS2TJ473T	1/4W 47K
R674	ERDS2TJ103T	1/4W 10K
R680-682	ERDS2TJ271T	1/4W 270
R683, 684	ERDS2TJ101T	1/4W 100
R696-699	ERDS2TJ104T	1/4W 100K
R701, 702	ERDS1FVJ332T	1/2W 3.3K ⚠
R703	ERD25FVJ101T	1/4W 100 ⚠
R704	ERDS2TJ473T	1/4W 47K

Ref. No.	Part No.	Values & Remarks
R705	ERDS2TJ103T	1/4W 10K
R706	ERDS1FVJ2R2T	1/2W 2.2 ⚠
R707	ERDS1FVJ3R3T	1/2W 3.3 ⚠
R709	ERDS2TJ332T	1/4W 3.3K
R710	ERDS1FVJ331T	1/2W 330 ⚠
R711	ERDS2TJ102T	1/4W 1K
R713	ERDS2TJ2R2T	1/4W 2.2
R716	ERDS2TJ2R2T	1/4W 2.2
R717	ERDS2TJ330T	1/4W 33
R801	ERDS2TJ750T	1/4W 75
R803	ERDS2TJ104T	1/4W 100K
R804	ERDS2TJ182T	1/4W 1.8K
R805	ERDS2TJ122T	1/4W 1.2K
R807	ERDS2TJ100T	1/4W 10
R809	ERDS2TJ122T	1/4W 1.2K
R810	ERDS2TJ103T	1/4W 10K
R811	ERDS2TJ102T	1/4W 1K
R813	ERDS2TJ102T	1/4W 1K
R814	ERDS2TJ103T	1/4W 10K
R815	ERDS2TJ560T	1/4W 56
R816	ERDS2TJ472T	1/4W 4.7K
R817	ERDS2TJ473T	1/4W 47K
R821	ERDS2TJ101T	1/4W 100
R823	ERDS2TJ472T	1/4W 4.7K
R827	ERDS1FVJ271T	1/2W 270 ⚠
R828	ERDS1FVJ680T	1/2W 68 ⚠
R829	ERDS1FVJ820T	1/2W 82 ⚠
R833, 834	ERDS2TJ221T	1/4W 220
R837, 838	ERDS2TJ474T	1/4W 470K
R839, 840	ERDS2TJ102T	1/4W 1K
R841	ERDS2TJ104T	1/4W 100K
R842-844	ERDS2TJ272T	1/4W 2.7K
R845-848	ERDS2TJ471T	1/4W 470
R849	ERDS2TJ105T	1/4W 1M
R850	ERDS2TJ182T	1/4W 1.8K
R851, 852	ERDS2TJ392T	1/4W 3.9K
R853, 854	ERDS2TJ100T	1/4W 10
R855, 856	ERDS2TJ103T	1/4W 10K
R857	ERDS2TJ471T	1/4W 470
R858	ERDS2TJ182T	1/4W 1.8K
R860-864	ERDS2TJ101T	1/4W 100
R1301, 1302	ERDS2TJ102T	1/4W 1K
R1303, 1304	ERDS2TJ822T	1/4W 8.2K
R1305, 1306	ERDS2TJ223T	1/4W 22K
R1307, 1308	ERDS2TJ392T	1/4W 3.9K
R1309, 1310	ERDS2TJ182T	1/4W 1.8K
R1311, 1312	ERDS2TJ821T	1/4W 820
R1313, 1314	ERDS2TJ333T	1/4W 33K
		CAPACITORS
C107, 108	ECBT1H101KB5	50V 100P

Ref. No.	Part No.	Values & Remarks
C109, 110	ECBT1H102KB5	50V 1000P
C111, 112	ECEA0JPS330B	6.3V 33U
C115, 116	ECFR1E223KR	25V 0.022U
C117, 118	ECFR1E682KR	25V 6800P
C119, 120	ECEA1HPS010B	50V 1U
C121, 122	ECBT1E223ZF5	25V 0.022U
C200	ECBT1E223ZF5	25V 0.022U
C201, 202	ECEA1EK3R3B	25V 3.3U
C203, 204	ECBT1E223ZF5	25V 0.022U
C205	ECBT1H180J5	50V 18P
C205	ECEA1CK100B	16V 10U
C206	ECBT1H180J5	50V 18P
C207, 208	ECBT1H151KB5	50V 150P
C209-216	ECBT1H101KB5	50V 100P
C219-230	ECBT1H101KB5	50V 100P
C231, 232	ECBT1E223ZF5	25V 0.022U
C250	ECEA1CU470B	16V 47U
C251, 252	ECEA1HPS3R3B	50V 3.3U
C253, 254	ECEA1HKR47B	50V 0.47U
C255, 256	ECBT1H180J5	50V 18P
C258, 259	ECBT1E223ZF5	25V 0.022U
C271, 272	ECBT1H101KB5	50V 100P
C273, 274	ECEA1CK220B	16V 22U
C275, 276	ECEA1HK010B	50V 1U
C301, 302	ECEA1HPS3R3B	50V 3.3U
C303	ECBT1H680J5	50V 68P
C304	ECQV1H823JZ3	50V 0.082U
C305	ECEA1EK3R3B	25V 3.3U
C306	ECBT1H221KB5	50V 220P
C307	ECEA1EK3R3B	25V 3.3U
C309, 310	ECBT1H820KB5	50V 82P
C311, 312	ECEA1HPS3R3B	50V 3.3U
C313	ECBT1E103ZF5	25V 0.01U
C314	ECBT1E223ZF5	25V 0.022U
C411, 412	ECEA1HK3R3B	50V 3.3U
C413, 414	ECEA1HK2R2B	50V 2.2U
C415, 416	ECFR1E822KR	25V 8200P
C417, 418	ECFR1E272KR	25V 2700P
C419, 420	ECFR1E473KR	25V 0.047U
C421, 422	ECEA1HK2R2B	50V 2.2U
C423, 424	ECEA1CPS100B	16V 10U
C425, 426	ECEA1CK220B	16V 22U
C427	ECEA0JK470B	6.3V 47U
C432	ECEA1HK2R2B	50V 2.2U
C433, 434	ECBT1E223ZF5	25V 0.022U
C471, 472	ECEA1HPS3R3B	50V 3.3U
C473, 474	ECBT1H101KB5	50V 100P
C475, 476	ECBT1H821KB5	50V 820P
C477, 478	ECBT1H680J5	50V 68P
C479, 480	ECEA1HK3R3B	50V 3.3U
C483, 484	ECBT1E103ZF5	25V 0.01U
C501, 502	ECBT1H331KB5	50V 330P

Ref. No.	Part No.	Values & Remarks
C503, 504	ECBT1H151KB5	50V 150P
C505, 506	ECEA1HU4R7B	50V 4.7U
C507, 508	ECBT1H6R8K5	50V 6.8P
C509, 510	ECKR1H223ZF5	50V 0.022U
C513	ECEA1CK100B	16V 10U
C514	ECEA0JK470B	6.3V 47U
C516-518	ECBT1E103ZF5	25V 0.01U
C519	ECEA1HU330B	50V 33U
C520	ECEA2AU100B	100V 10U
C521	ECEA1CU101B	16V 100U
C523, 524	ECEA1HPS3R3B	50V 3.3U
C525, 526	ECBT1H102KB5	50V 1000P
C531	ECBT1E223ZF5	25V 0.022U
C535, 536	ECKR1H102ZF5	50V 1000P (E, EB)
		(GC, GN)
C535, 536	ECKR1H223ZF5	50V 0.022U (EG)
C537, 538	ECBT1H102KB5	50V 1000P
C539, 540	ECKR1H102ZF5	50V 1000P (E, EB)
		(GC, GN)
C539, 540	ECKR1H223ZF5	50V 0.022U (EG)
C541, 542	ECBT1H102KB5	50V 1000P
C543-546	ECKR1H102ZF5	50V 1000P (EG)
C597, 598	ECBT1H221KB5	50V 220P
C602	ECEA1VK3R3B	35V 3.3U
C603	ECEA0JU470B	6.3V 47U
C604	ECEA1VK100B	35V 10U
C605	ECBT1E223ZF5	25V 0.022U
C606	ECEA1EK4R7B	25V 4.7U
C607	ECEA1CK100B	16V 10U
C608	ECEA0JU102E	6.3V 1000U
C610	ECBT1E223ZF5	25V 0.022U
C611	ECEA1HK010B	50V 1U
C612	ECQV1H333JZ3	50V 0.033U
C613	ECQV1H683JZ3	50V 0.68U
C614, 615	ECBT1H101KB5	50V 100P
C700	ECKWKC103PF2	400V 0.01U ⚠
C701, 702	ECKR1H103ZF5	50V 0.01U
C703, 704	ECEA1EU100B	25V 10U
C705, 706	ECEA1CK100B	16V 10U
C707	ECBT1E103ZF5	25V 0.01U
C708	ECEA1CK100B	16V 10U
C709	ECEA1HK2R2B	50V 2.2U
C710	ECBT1E223ZF5	25V 0.022U
C711, 712	ECETS56V472U	56V 4700U
C713	ECQE2104KF3	250V 0.1U
C715	ECEA1VK100B	35V 10U
C716	ECKR1H103ZF5	50V 0.01U
C731	ECFR1E104ZF5	25V 0.1U
C800, 801	ECBT1E223ZF5	25V 0.022U
C802	ECFR1E104ZF5	25V 0.1U
C803	ECEA1CK100B	16V 10U
C804	ECFR1E104ZF5	25V 0.1U

Ref. No.	Part No.	Values & Remarks
C805	ECBT1H102KB5	50V 1000P
C806	ECFR1E104ZF5	25V 0.1U
C807	ECEA1CK100B	16V 10U
C808	ECEA1HK010B	50V 1U
C809	ECQV1H104JZ3	50V 0.1U
C810	ECBT1H220J5	50V 22P
C811	ECEA0JK101B	6.3V 100U
C814	ECEA0JK101B	6.3V 100U
C815	ECEA1CK100B	16V 10U
C816	ECBT1H102KB5	50V 1000P
C818	ECEA1EK4R7B	25V 4.7U
C819, 820	ECEA0JK101B	6.3V 100U
C821	ECBT1E223ZF5	25V 0.022U
C822	ECEA1EK100B	25V 10U
C823	ECBT1H102KB5	50V 1000P
C825, 826	ECEA1EN100SB	25V 10U
C827, 828	ECBT1C103NS5	16V 0.01U
C829, 830	ECBT1H102KB5	50V 1000P
C831	ECBT1E223ZF5	25V 0.022U
C833	ECQV1H104JZ3	50V 0.1U
C834	ECBT1H102KB5	50V 1000P
C835	ECBT1E223ZF5	25V 0.022U
C836-838	ECEA1EK4R7B	25V 4.7U
C839, 840	ECBT1H331KB5	50V 330P
C843	ECBT1H220J5	50V 22P
C844	ECBT1H102KB5	50V 1000P
C1301, 1302	ECFR1E123KR	25V 0.012U
C1303, 1304	ECFR1E683KR	25V 0.068U
C1305, 1306	ECFR1E472KR	25V 4700P
C1307, 1308	ECFR1E223KR	25V 0.022U
C1309, 1310	ECEA1HPS010B	50V 1U

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